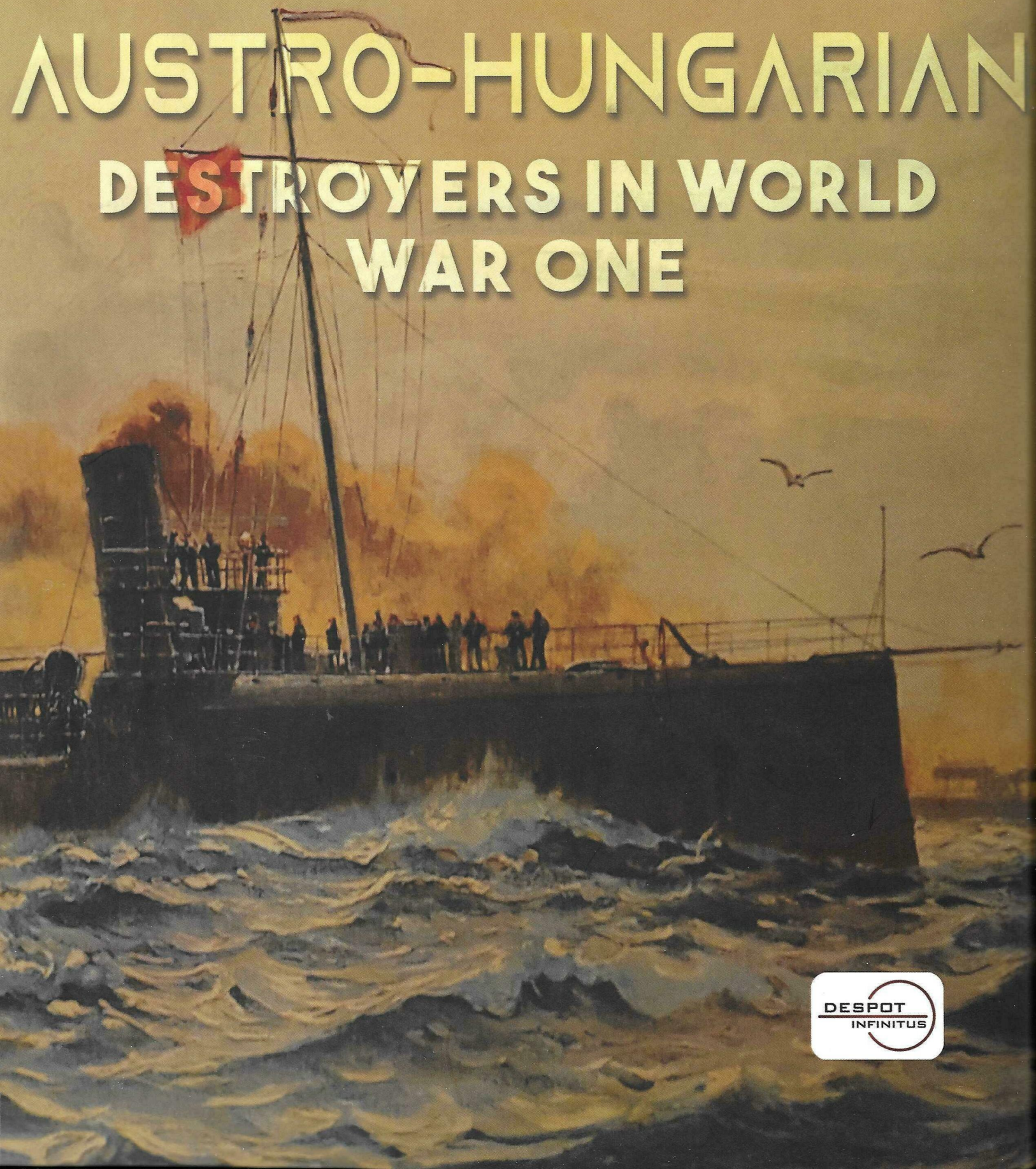


ZYONIMIR FREIVOGEL

AUSTRO-HUNGARIAN DESTROYERS IN WORLD WAR ONE





Zvonimir Freivogel

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FOREWORD

After finishing my books about Austro-Hungarian battleships, cruisers, and submarines, it was finally the turn of the destroyers. I published a series of articles about the Imperial and Royal destroyers of the Austro-Hungarian monarchy almost 30 years ago in the military magazine *Hrvatski vojnik*, but in the meantime I came across a series of additional information about the technique, history, and service of these ships. Thus from these articles only main frames remained to be filled with a compilation from some old and new sources. The best information can be found in F. F. Bilzer's book *Die Torpedoschiffe und Zerstörer der k.u.k. Kriegsmarine 1867-1918* (see also list of references), and I also found information about the service of individual ships in W. Aichelburg's book *Register der k.u.k. Kriegsschiffe*. The most recent and extensive source are three books written by E. Sieche, *Zeittafel der maritimen Kriegsergebnisse der k.u.k. Kriegsmarine*, for the years 1914-1916, 1917 and 1918. The names of the ships' commanding officers can be found in the standard work written by H.H. Sokol, *Österreich-Ungarns Seekrieg 1914-18*, published as far back as 1933 in sequels and bound later, mostly in the appendices (*Textbeilagen*) with fleet lists (*Ordre de bataille*) and the names of ships' commanders at certain dates. The names of commanding officers in the periods in-between or during some important operations were listed after each chapter of this voluminous work with 800 pages. Great help was the naval magazine *Marine - Gestern, heute*, published in Austria from 1974 to 1988, with a series of thematic articles, as well as the new magazine *Österreich maritim* published since 2001 by the association *Freunde Historischer Schiffe* (Friends of Historical Ships) in Austria, as well as a large number of books, brochures, and articles written by other authors, cited in the literature. The appearance of individual ships is beautifully presented in sketches and drawings made by Austrian authors E. Sieche, P. Schupita, F. Prasky and F. F. Bilzer, Hungarian ship modelers Ferenc Orbán and Péter Kovács, Croatian Eng. Danijel Frka and others. Italian association *Navimodellisti Bolognesi* also published drawings of A-H warships in Italian service, like the destroyer *Grado*, the former *Triglav II*.

A systematic and chronological overview of all naval operations can be found in my book on the naval war on the Adriatic from 1914 to 1918, thus the operations themselves are not described in detail here, unless being significant to the individual ship described.

At this point I would like to thank all the friends and acquaintances who helped me with advice, photographs and drawings, such as Dr. Erwin Sieche, Dr. Wladimir Aichelburg, Oliver Trulei, Nikolaus Sifferlinger and the sadly deceased prof. Friedrich Prasky and Dr. Lothar Baumgartner from Austria, Mr. Jürgen Eichardt and the deceased Messrs. Karl Schrott, Siegfried Breyer and Eng. Franz Selinger from Germany, to my friend Eng. Danijel Frka from Kraljevica, Mr. Josip Novak from Varaždin, Zdenko Kinjerovac from Zagreb, the late ship modeler Željko Prša from Vinkovci, the late Dr. Achille Rastelli from Italy, the late René Greger from the former Czechoslovakia, who was one of the best experts on Škoda cannons, especially the naval artillery, as well as the history of the Austro-Hungarian and Royal Yugoslav Navy. I came into contact with most of these dear people when I had already started writing and publishing articles in *Hrvatski vojnik*, which were not sufficiently illustrated at the time, but soon photographs and sketches from their collections began to arrive.

In 2021, the Varaždin Institute for Scientific Research of the Croatian Academy of Science and Arts (HAZU) published my booklet on the Austro-Hungarian destroyer *Warasdiner*, and the method of working on this book and collecting materials served as a template for compiling this book, as well as recently published books on German motor torpedo and missile boats (*Schnellboote*). Therefore, I especially thank Dr. Vladimir Huzjan from the Institute for Scientific Work of the Croatian Academy of Sciences and Arts in Varaždin for his advice and suggestions on composing the text and illustrations. I reworked the chapter on *Warasdiner* to avoid auto-falsification, but the data of course remained the same.

I owe the greatest thanks to my publisher and namesake Zvonimir Despot, owner of the publishing house *Despot Infinitus*, for his willingness to publish this book as well, to the editor Danijel Tatić, the art editor Alan Prikratki and the proofreader Lucija Kobić, all from the publishing house *Despot Infinitus* for their efforts in editing my manuscripts.

Coburg, 2021

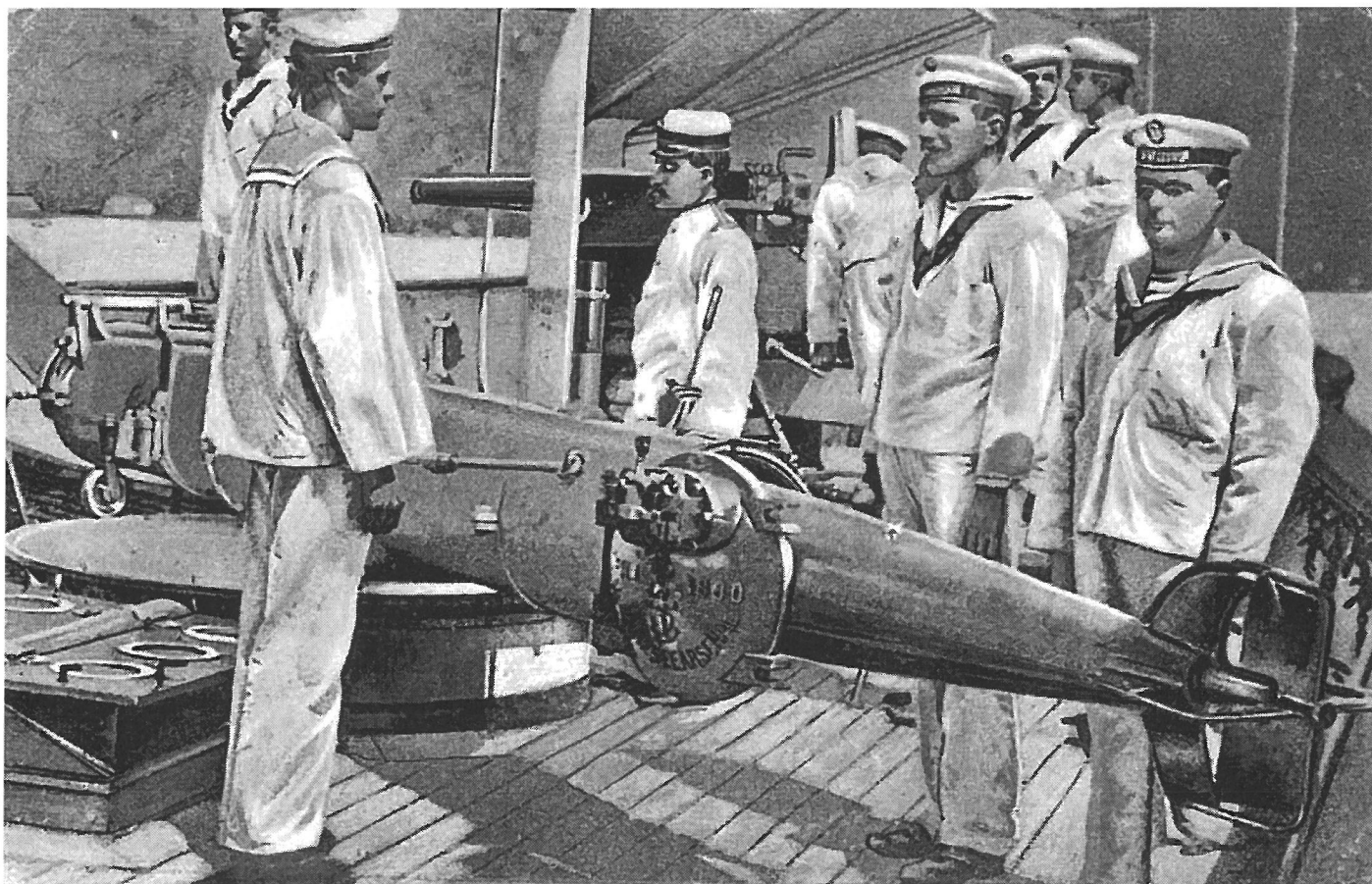
INTRODUCTION - AUSTRIAN AND AUSTRO-HUNGARIAN EXPERIMENTAL TORPEDO SHIPS

The development of warfare technology on the world's seas was after the long evolution of sailing warships significantly accelerated in the mid-19th century with the introduction of steam propulsion and cannons with rifled barrels for firing explosive shells. The construction of the first armored vessels followed, as the wooden hulls were no longer offering sufficient protection. Soon the first iron and then steel ships were built.

Even in the age of wooden ships, there were "alternative" weapons, such as ships loaded with flammable material or barrels of gunpowder, because round cannonballs had neither enough range nor penetration power to sink large wooden ships-of-the-line. The next step was mines, as it was discovered that the water was not compressible and did not hold back the explosion but transmitted its pressure further, to destroy nearby submerged objects, such as the ship's hull. Anchored and towed mines were used, as well as mines on spars, which were to explode underwater next to or below the hull. This is how the first "spar torpedo boats" were created, boats with a mine on a spar. The Austrian Commander Ivan Lupis, also known as Johannes Blasius Lupis or Ivan Vukić, CO of the frigate *Bellona*, also dealt with this topic and built the first autonomous torpedo in the early 1860s, called *Coastal Savior* (*Küstenretter*). The propulsion of this small enclosed explosive boat six meters long was a clockwork driven by a coiled spring and steered by reins from the shore. The Austrian Ministry of War rejected his proposal in 1864, but Lupis teamed up with the engineer Robert Whitehead from Rijeka/Fiume, who then built the first spindle-shaped or fish-shaped torpedo (*Fischtorpedo*) powered by a compressed air engine. A depth maintenance device was also installed, and the torpedo was aimed by turning the torpedo tube or the entire ship / boat from which the torpedo was launched. Whitehead paid off Lupis in 1866, and in December of the same year he presented his torpedo to a commission of the Austrian, the later Austro-Hungarian Imperial & Royal Navy (*Kaiserliche und königliche Kriegsmarine*). On April 15, 1867, the Ministry of War, that is, the Navy Section (*Marinesektion*) of this Ministry, signed a contract with Whitehead for the purchase of his patent for 200,000 guilders, provided that the following experiments also succeeded. The experiments were performed on the converted gunboat *Gemse*, built in 1860/1861. A 470 mm diameter cast iron torpedo tube was installed in the bows below the waterline, and the torpedo would run towards the target at a speed of 11 knots. An underwater floating target was also built, representing the side of an armored frigate (ironclad), in fact the hull section below the armored belt. The explosion of 40 Viennese pounds (22.4 kg) of gun-cotton penetrated the skin and in case of a hit, the ironclad would surely sink. The Austrian Navy still asked for a larger explosive charge, weighing 60 Viennese pounds (33.6 kg). Torpedo speed was insufficient as well and was to be launched by a rod powered by compressed air, and the torpedo tube was to be floated before launching. During following trials on 30 October 1867, the only available torpedo was lost, and the experiments were postponed until the next prototype was completed. The trials were resumed in February 1868, and the torpedo (without the explosive charge) was launched at the steam yacht *Fantasie*, at a distance of 630 m, and beside the yacht a 63 m long and 5.5 m high net was spread, to catch the torpedo before hitting the target. Soon new 40 cm (16-inch) torpedoes were built by Whitehead; a new torpedo tube was suspended under the bowsprit of *Gemse*, and torpedoes

could be launched from different depths. From 29 launchings, eleven hits were reached. The Austro-Hungarian Navy decided to buy the 35 cm (14-inch) torpedo and its drawings for the contracted sum of 200,000 guilders but declined to pay additional 600,000 guilders for the exclusive purchase of Whitehead torpedoes, as the secret was already revealed, and other navies began to develop their own torpedoes. Thus Whitehead was permitted to offer and sell torpedoes to other naval powers. British Royal Navy bought one torpedo tube and four torpedoes already in 1869, and in the same year the A-H Navy ordered ten torpedoes of the “new type” (in 40 cm or 16in caliber). From 1870 onwards, the Imperial and Royal Navy organized torpedo courses for its naval officers. Immobile targets were easy to hit, but the hit on a movable target was considered to be almost impossible.

Soon *Gemse* was replaced by the converted gunboat *Seehund* (Sea Lion), a veteran of the Battle of Lissa in 1866, serving for launching experiments with compressed air or from side cradles trained towards the target. It was also possible to lower the torpedo to the wanted depth, and to launch it alongside the ship's side over the bow. Both mentioned converted wooden gunboats were too slow for active duty, and it was decided to build faster ships. The Commission for Torpedo Trials (*Torpedoversuchskommission*) suggested in 1872 to build an iron ship, which was to serve exclusively as a torpedo ship. A-H shipbuilding engineer Jakob Bondgard Andressen completed four conceptual designs; one ship was to displace 1,250 tonnes, and another 3,300 tonnes, and each was to be armed with two 24 cm (9.4in) guns and four torpedo tubes. Andressen's third design was for a large 8,988-tonnes-ship with four heavy guns, a score of light guns and four torpedo tubes¹, and the fourth design was for a 748-tonnes-ship with two 12 cm (4.7in) guns and four torpedo tubes. Three smaller ships were to reach a speed between 15 and 16 knots, and the large ship was to reach only 13 knots. None of these designs was fulfilling the requirements of the Navy Section from Vienna.



Torpedo tube on one Austro-Hungarian torpedo boat. (Novak)

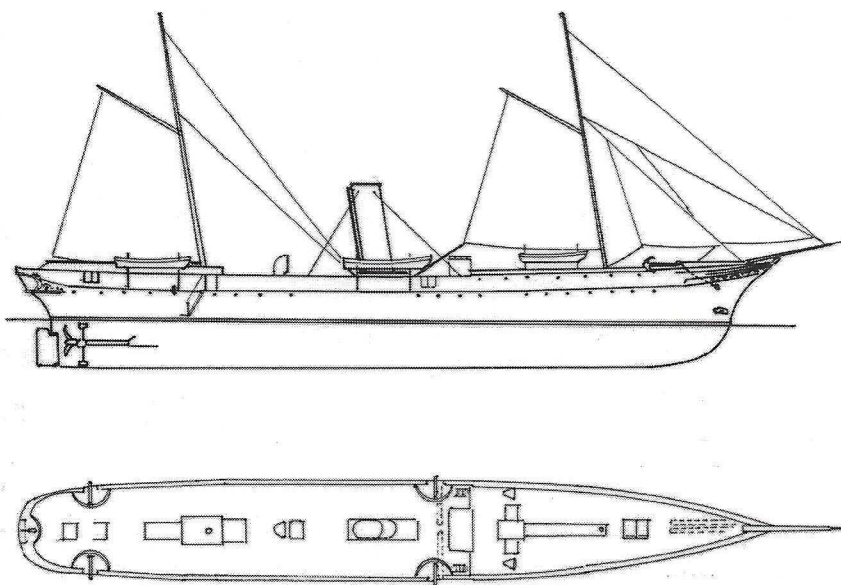
¹ It would have been larger than the ironclad *Kronprinz Erzherzog Rudolf*, built in 1890, with a displacement of 7,432 tonnes, and the ironclads of the *Monarch* class, built in late 19th Century, with only 5,878 tonnes.

TORPEDO SHIPS *ZARA*, *SPALATO*, *SEBENICO* AND *LUSSIN*

Only in 1878, in the Naval Arsenal at Pula there began the building of the first A-H torpedo ship with a displacement of about 850 tonnes that was to be named *Zara* (Italian and Austrian name for the Croatian harbor of Zadar). The vessel was modelled after the German “torpedo cruiser” *Zieten*, being commissioned in 1876². Most Austrian and Austro-Hungarian vessels were – because of tradition – named after Italian names of the Croatian coastal cities, what was changed only in 1912.

Zara was built in Pula after design of the naval engineer Josef von Romako; the keel was laid on 1 August 1878, the launching followed on 13 November 1879 and the first trials on 28/29 April 1881 were to be interrupted because of a strong gale from the north (called *bora*).

In spite of her modern concept and being built from steel, the ship was having an outdated appearance and in addition to the steam propulsion she had a two-masted schooner rig with a total surface of 275.6 square meters. The hull was similar to older corvettes, gunboats, and yachts, with decorated bow and stern. The designated displacement amounted to 852.22 tonnes, and the full load to 883 tonnes. The length between perpendiculars amounted to 55 m, with 67.71 m over all, a beam of 8.22 m and the draught of 4.10 m. The low commando bridge was positioned amidships, forward of a large funnel, and four 9 cm (3.4in) main guns were mounted on side sponsons, two atwartship of the bridge, and another pair aft. The vessel was protected by a two-layer armored deck, each 19 mm thick.



Torpedo ship *Zara* (after F. F. Bilzer)

² S. M. S. *Zieten*, built in 1876, displacement 1,001-1,170 tonnes, 2,450 PS, 16 knots, six 37 mm guns and two torpedo tubes, crew 94.

The propulsion of **Zara** comprised two horizontal two-cylinder triple-expansion steam engines with a total of 1,800 hp, built by the Stabilimento Tecnico Triestino (S. T. T.) from Trieste, being supplied by steam from five cylindrical steam boilers. Each of two engines was driving one shaft with one screw. The envisaged top speed of 15 knots was still not reached, and Zara reached only 14.12 knots on trials. The bronze screws with a diameter of 2.74 m were thus replaced by larger screws with a diameter of 3.05 m, and it was necessary to lengthen the shafts as well. These measures were not very helpful, on following trials in November 1881, the average speed of only 14.02 knots was attained.

After being rebuilt in 1889, the engines of **Zara** were supplied by steam from three locomotive boilers, and the total power fell to 707 hp, for a speed between 10.72 and 10.94 knots.

The main armament were four above-water torpedo tubes, two at the bow, and another pair amidships, mounted under the commando bridge and the forward gun platforms. The artillery suite included the already mentioned four 9 cm (3.4in) L/24 guns, one 7 cm (66 mm or 2.6in) L/15 gun, one 47 mm revolver guns, four 47 mm L/33 rapid-fire guns and two 25 mm Palmkrantz heavy machine-guns.

After being rebuilt as a training ship in 1906/07, **Zara** was armed with only two 7 cm L/45 guns, four 47 mm L/33 and four 47 mm L/44 guns. Both amidships torpedo tubes were removed, together with one provisionally installed trainable torpedo tube on deck, and only two bow tubes were retained.

The second ship of the same class, **Spalato** (Italian name for the city of Split), was ordered from the Stabilimento Tecnico Triestino (S. T. T.) in Trieste. The hull, ship's engines and boilers were produced by the shipyard, with the Naval Arsenal at Pula building other components, like the masts, other rigging, ship's boats, anchors etc. The ship was launched on 30 August 1879, and after her engines were installed, she was delivered to the A-H Navy and towed to Pula on 27 July 1880. The shafts were to be replaced by longer shafts too, but the speed was even lower than on **Zara**, and at 1,370 hp only 12.63 knots were reached.

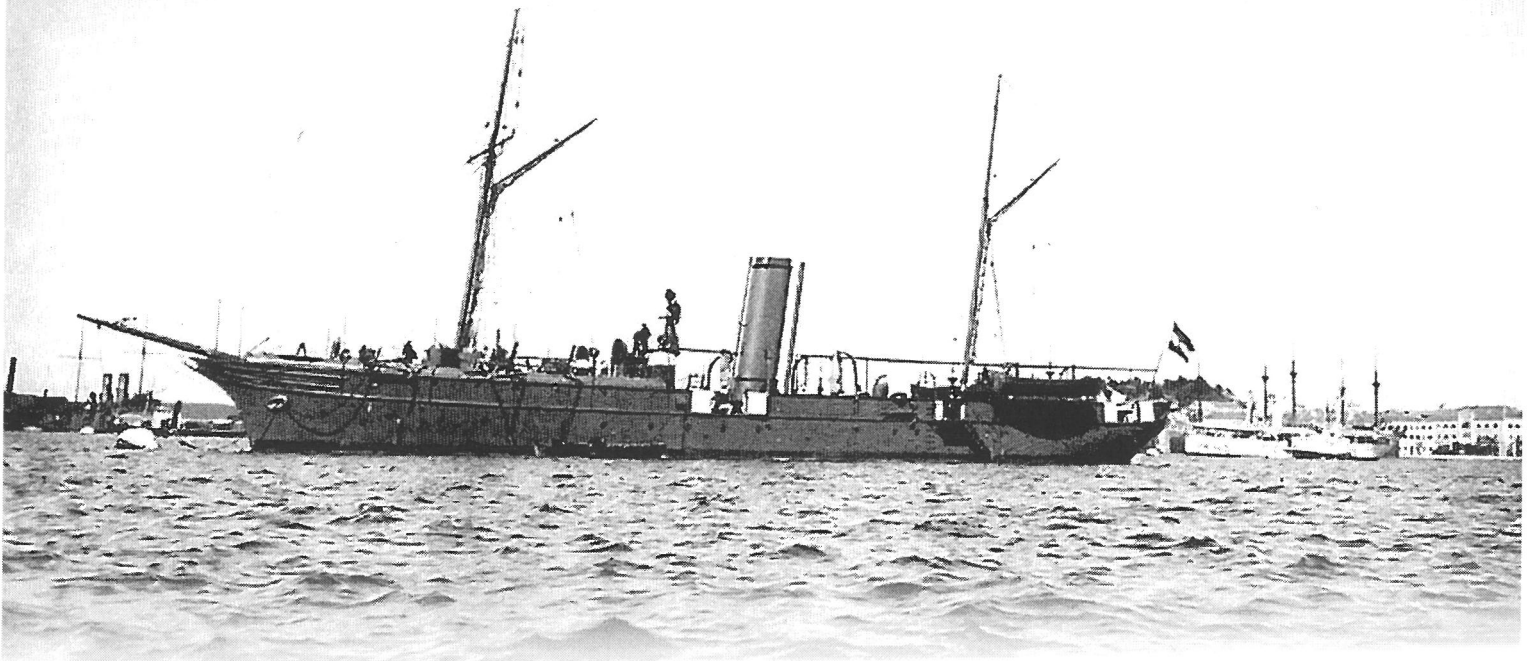
Even before trials with the first two vessels could be carried out, the third vessel was ordered, to be named **Sebenico** (Šibenik), and built at Pula as well. As the torpedo compartment amidships and the boiler room on the first pair were too cramped, the hull was lengthened by two frame-distances, both amidships and aft, to reach a better length-beam coefficient. The design displacement grew to 876.7 tonnes and the full load displacement to 964,2 tonnes, the length between the perpendiculars to 57.10 m, the length over-all to 64.91 m, the beam to 8.24 m, and the draught to 4.20 m.

The greater length was not helping much: two steam engines with a total power of 1,488 to 1,598 hp enabled the top speed of 12.81 knots and an average or medium speed of 12.41 knots. The artillery was the same as on **Zara** and **Spalato**, but only one forward submerged torpedo tube was mounted.

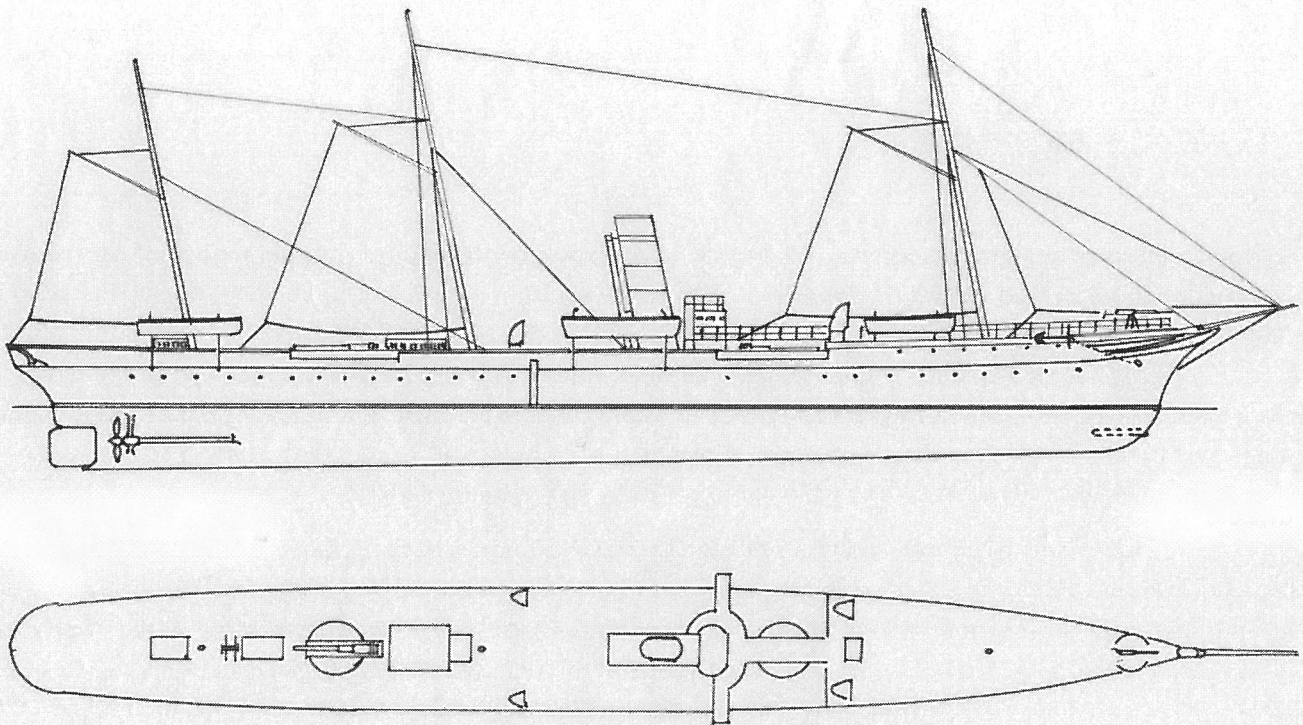
During first trials with **Zara**, Eng. Romako modified the design once more, and the fourth vessel, to be named **Lussin** (Lošinj) was to be even longer, and powered by twice as powerful engines, what was finally not carried through. The length between perpendiculars rose to 69.90 m, the overall length to 79.75 m, the beam with 8.42 m was the same as on **Sebenico**, and the draught varied between 4.06 and 4.30 m. The design displacement grew to 1,011.17 tonnes, and the full load displacement to 1,122.5 tonnes. Two steam engines with a total output of 1,767.5 hp enabled the maximum speed of 12.95 knots and the average speed of 12.14 knots. With 3.600 hp a theoretical speed of 17 knots would have been possible, even higher than on the German **Zieten**.

Lussin was rigged as a three mast schooner, with gaff sails on all masts and two jibs, and with a total sail area of 387.63 square meters. She was armed with one submerged bow torpedo tube, two 15 cm (5.9in) L/35 guns (mounted one forward of the bridge and another aft, between the main and the mizzen mast), one 7 cm L/15 guns, five 47 mm revolver guns, and two 25 mm heavy machine-guns. The crew was composed of 13 officers with 140 NCOs and sailors.

Torpedo ship *Sebenico* at Pula. (Lemachko)



Torpedo ship *Lussin*. (After F. F. Bilzer)



Tactical and technical data

	<i>Zara</i>	<i>Spalato</i>	<i>Sebenico</i>	<i>Lussin</i>
Displacement (tonnes)	855.22 - 883	855.22 – 931.25	876.7 – 96.,2	1,011.17 – 1,122.5
Dimensions (L x B x D)	55/62.71 x 8.22 x 4.10 m		57.20/64.91 x 8.24 x 4.20 m.	69.9/79.75 x 8.42 x 4.06/4.30 m
Propulsion (two steam engines)	1,800 hp	1,370 hp	1,598 hp	1,767.5 hp
Maximum and average speed	14.29/14.02 knots	12.63/12.34 knots	12.81/12.41 knots	12.95/12.14 knots
Armament (as built)	Four 9 cm, one 7 cm, five 47 mm, two 25 mm, four torpedo tubes.		Four 9 cm, one 7 cm, four 47 mm, two 25 mm, one torpedo tube.	Two 15 cm, one 7 cm, five 47 mm, two 25 mm, one torpedo tube.
Armament (later in service)	Two 7 cm, six 47 mm, two torpedo tubes (since 1917)	Two 12 cm, one 7 cm, one 37 mm, one 47 mm, two torpedo tubes (since 1901)	Two 12 cm, one 7 cm, eight 47 mm, four 37 mm, two 8 mm mg's, one torpedo tube (since 1903)	Four 47 mm (as a yacht)
Complement	13 + 135	13 + 135	13 + 135	13 + 140

Building data

	Shipyard	Keel laying	Launching	Completion
<i>Zara</i>	Arsenal, Pula	01/08/1878	13/11/1879	13/06/1881
<i>Spalato</i>	S. T. T., Trieste	Sept. 1878	30/08/1879	Sept. 1881
<i>Sebenico</i>	Arsenal, Pula	29/11/1880	28/02/1882	Dec. 1883
<i>Lussin</i>	S. T. T., Trieste	Sept. 1882	22/12/1883	Oct. 1884

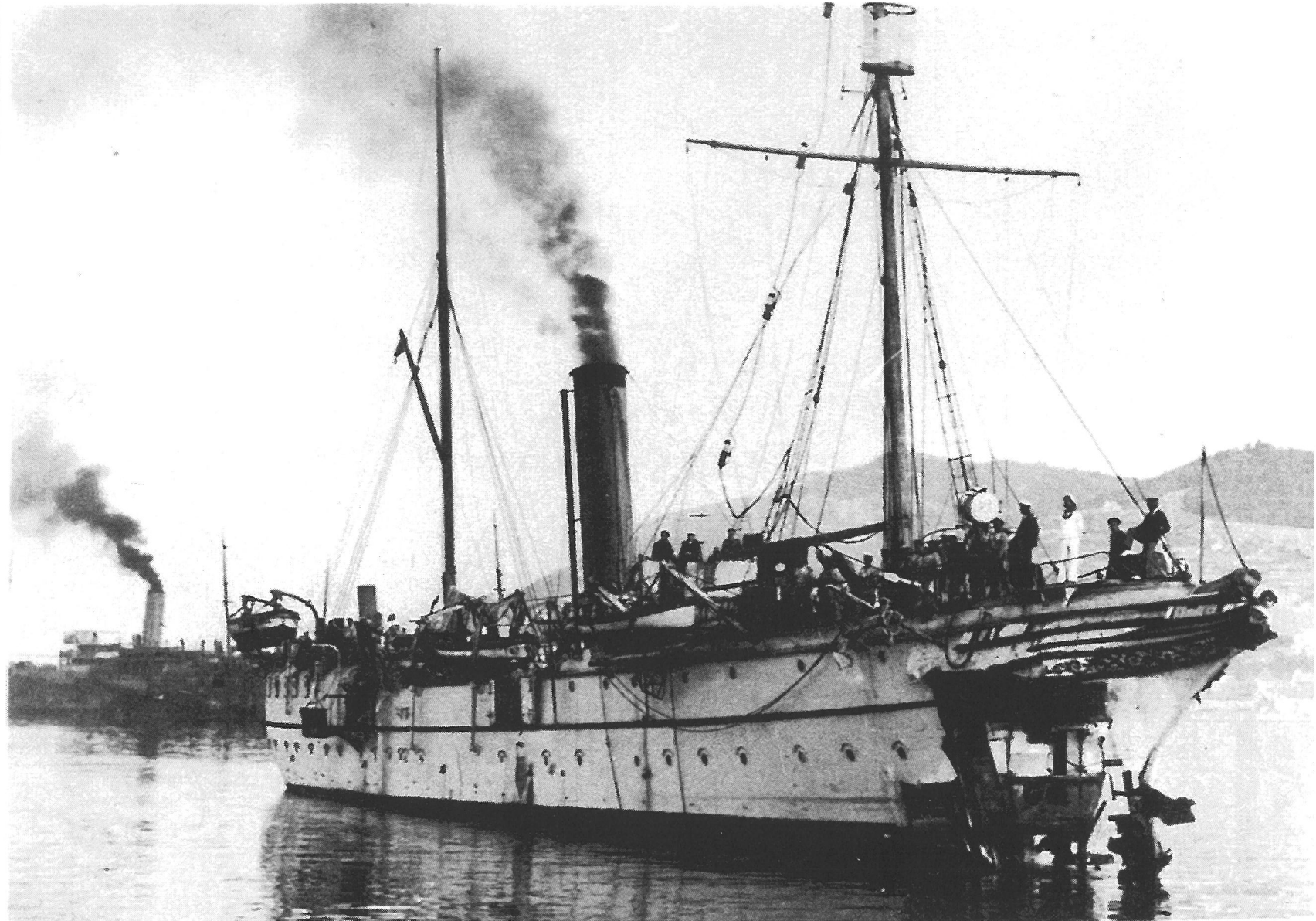
SERVICE AND FATES

ZARA served since her commission on 17 July 1882 as an experimental and training ship mostly. She was attached to the torpedo school, served several times with the Summer Squadron³ or was in reserve. Early during the World War One she served as a guard ship in Boka kotorska (near Đenovići), and her first CO during this period was *LSLt*⁴ Viktor Klöckner, being succeeded later by *LSLt* Franz Scheiwein. On 30 May 1917 **Zara** was attached to the naval cadets school. As she sailed from Boka to Pula on 18 June 1917, there came to an explosion in the forward torpedo compartment near the island of Lokrum, opening her hull above the water line on both sides of the bow. The transversal bulkhead aft of the torpedo compartment was still holding, and the ship remained afloat.

Zara entered harbor of Dubrovnik and was deliberately stranded to prevent the sinking. As the damaged parts of the plating were removed, **Zara** proceeded on her own power to Pula, being escorted by the *Tender 200*, and arrived at Pula on 26. June. The cause for the explosion was the overaged and thus unstable explosive charge in one of the torpedoes. The vessel was repaired and served as a training ship until the end of the war, also as a part of the local defense, and was commanded by Reserve Lieutenant Friedrich Hreglich. After the war, **Zara** was ceded to Italy in 1920 and scrapped.

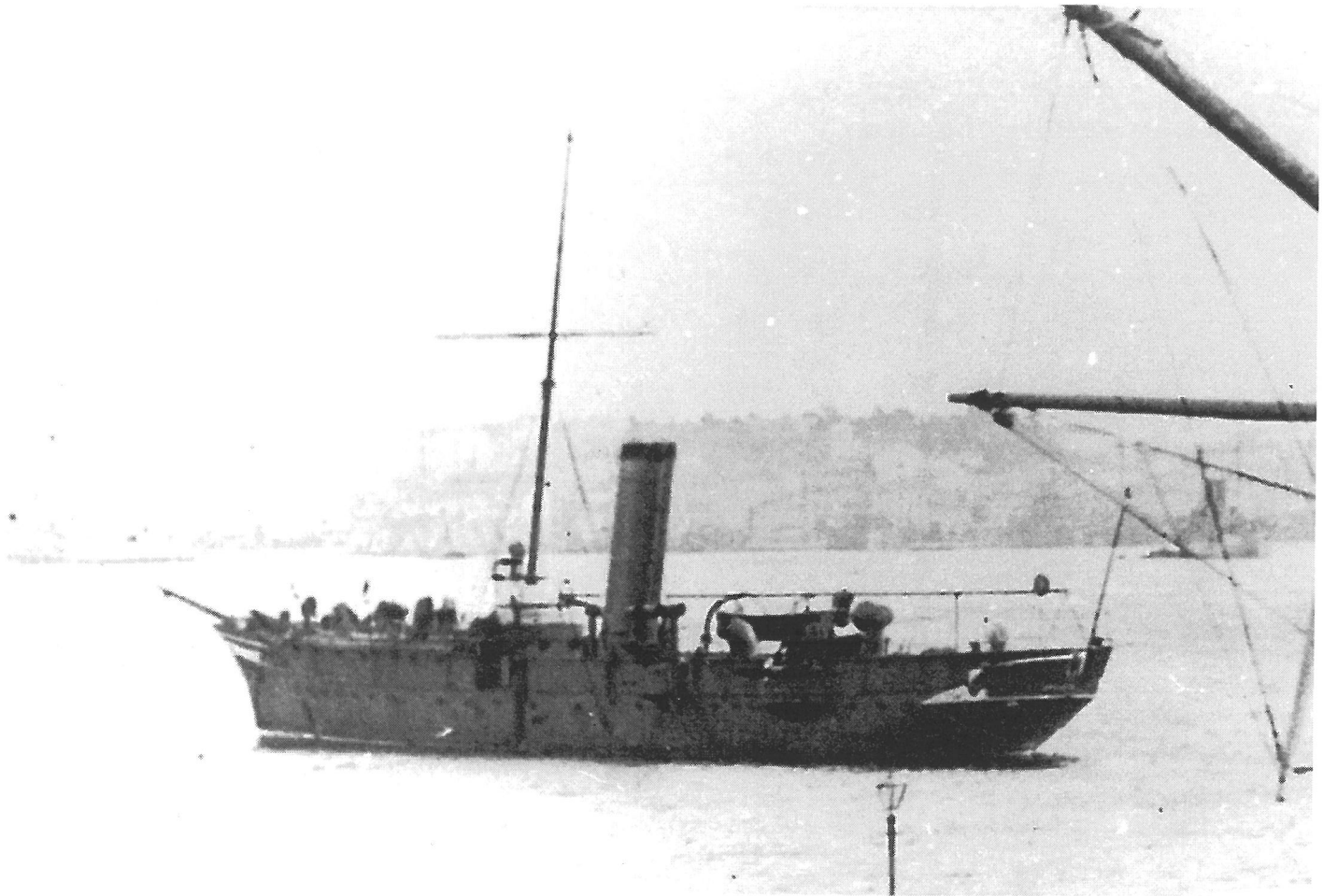
³ A-H naval vessels initially served in summer months with the active or Summer Squadron (*Eskadre*), to be mostly placed into reserve during the winter, with exception of a small Winter Squadron.

⁴ *LSLt* = *Linienschiffsleutnant* (see the Attachment V - Naval officers ranks).

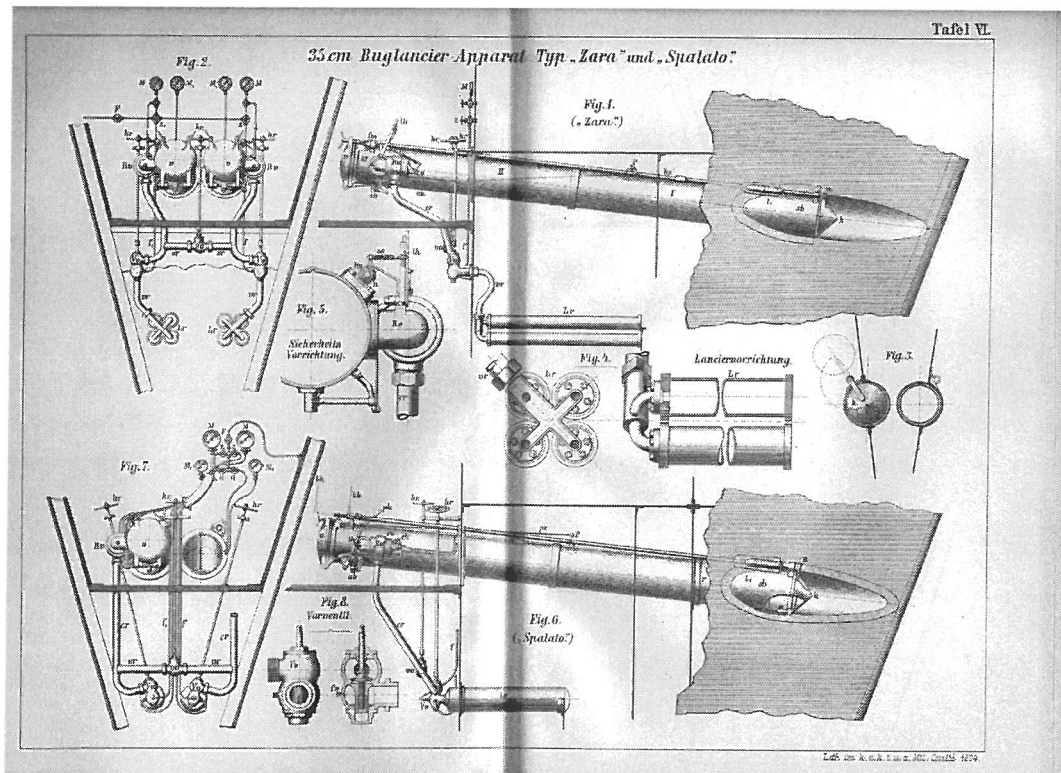


Zara after the explosion in her forward torpedo tubes. (Schrott)

SPALATO carried out her trials on 10 September 1881, as the maximum speed of 12.5 knots was measured. Afterwards she was slipped on the island of Uljanik (or Olive Island, in the Naval Arsenal at Pula), remaining there for three years. Her forward torpedo tubes were installed, together with longer shafts, and engines modified. A new trial on 23 November 1883 was aborted because of malfunction on her starboard engine, and on 26 January 1886, the maximum speed of only 12.63 knots was achieved. **Spalato** served as a training ship as well, was intermittently in service and reserve, and was attached to the artillery training ship **Radetzky** (later renamed **Adria**) on 1 August 1897, to be armed with several guns in 15 cm (5.9in), 12 cm (4.7in) 7 cm (3.4in), or 47 mm calibers. Early during the WW One, **Spalato** was commanded by LSLt i.R. Joseph Heidenreich. From 24 May 1915 until the end of the war, **Spalato** served with the local defense force in Pula and Veruda, being commanded at the end of her service by Reserve Sub-Lieutenant Franz Vrabčić. In 1920, **Spalato** was ceded to Italy and scrapped.

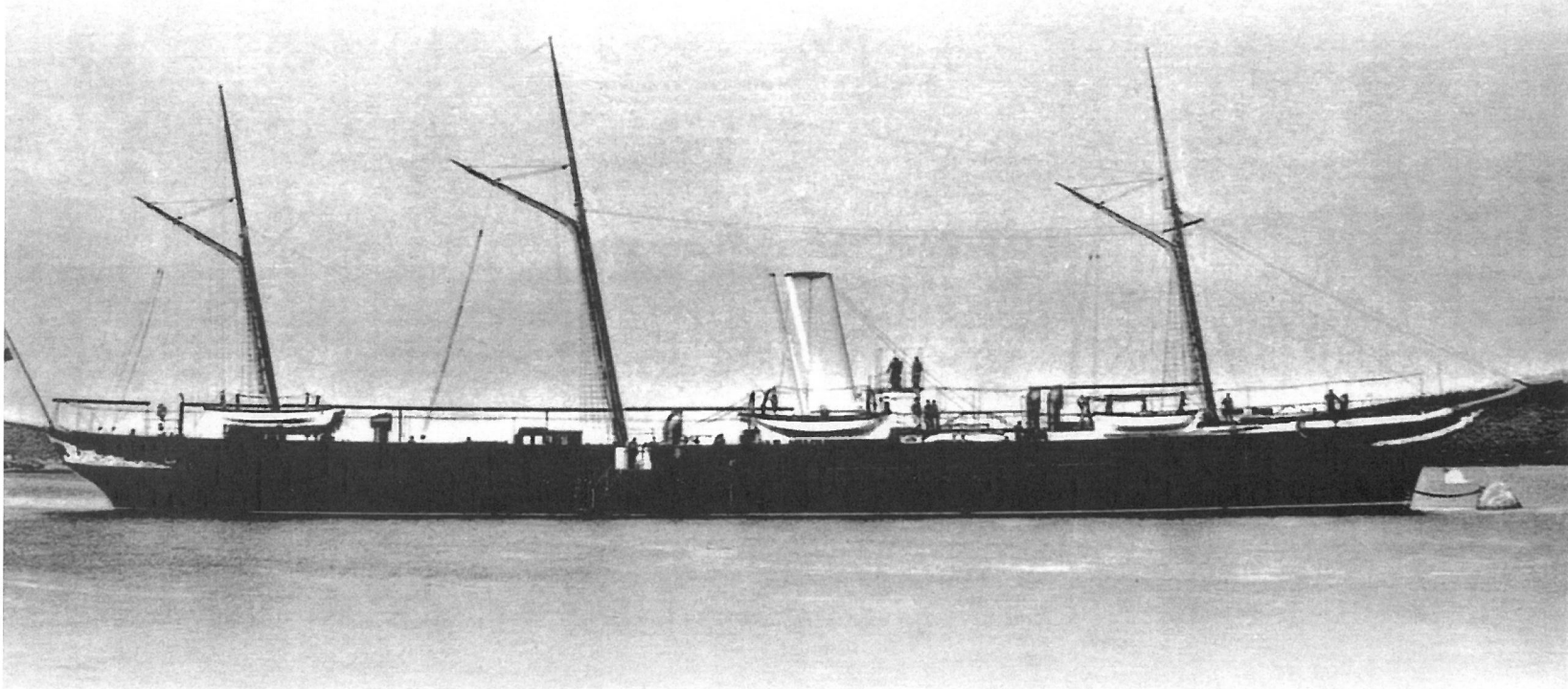


Torpedo ship *Spalato* before 1900. (Schrott)



Forward torpedo tubes on *Zara* and *Spalato*. (Atlas T. U.)

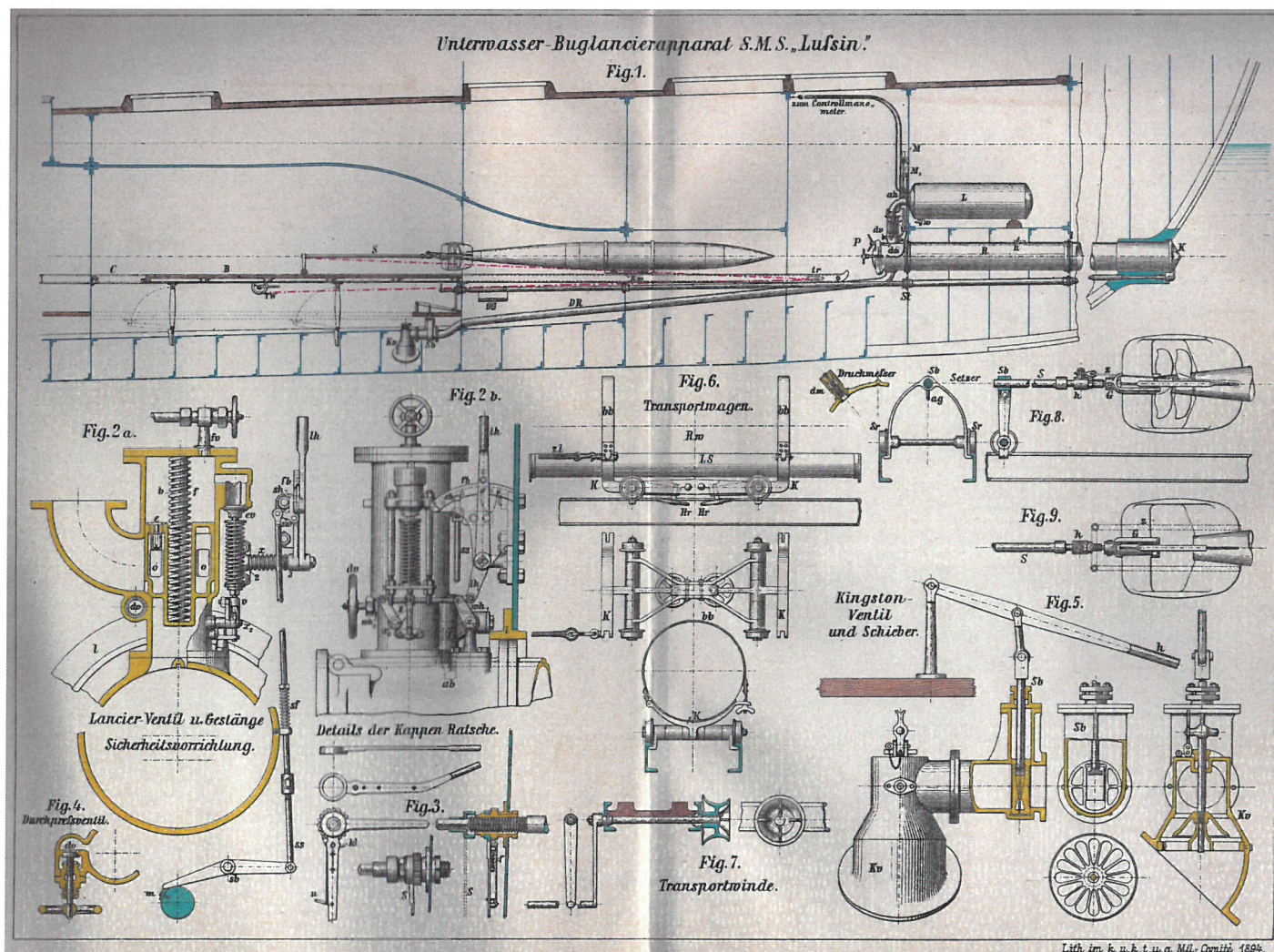
SEBENICO was also completed late, as her design was modified during building, and she entered service with the Squadron on 2 January 1884, to be sent to a training cruise to Greece between 23 January and 8 May of the same year, visiting a score of Greek harbors and islands. She assisted the salvage operations of the stranded Greek steamer *Epiros*. In May 1884, she was put into reserve, and served later intermittently in active duty and reserve. In 1887, she received new 47 mm guns, serving as a stationary vessel in Constantinople between November 1895 and 7 May 1896, and in Piraeus in January 1897. Between 3 February and 4 May 1897, she was part of the A-H squadron in blockade duty off Crete (where a rebellion of Greeks erupted against the Turkish rule, hoping to achieve the annexation of Crete to Greece). On 17 March 1897, *Sebenico* sank a Greek sailing ship near Cape Dia. Afterwards she served as a stationary in Rethymnon and Candia on Crete, returned to Pula and was rebuilt as the stokers' training ship. In 1902/03 she served as a guard ship in Boka and cruised off the Montenegrin coast, to be rebuilt later to an artillery training ship. On 13 January 1904, *Spalato* assisted the salvage of the Austrian Lloyd's steamer *Calypso*, and in September 1914, she served as the guard ship in Veruda near Pula, as a part of the 4th Mine Warfare Command, under *LSKpt*⁵ Franz Gauss von Haanberg. She was activated again on 17 May 1915, before the outbreak of war with Italy, and was stationed in Novigrad until 1917, being then returned to Pula, to become the auxiliary vessel of the Torpedo School. After the war she was ceded to Italy and scrapped.



Torpedo ship *Lussin* served as a yacht too. (Lemachko)

⁵ *Linienschiffskapitän* = Captain; see the Attachment V - ranks of naval officers.

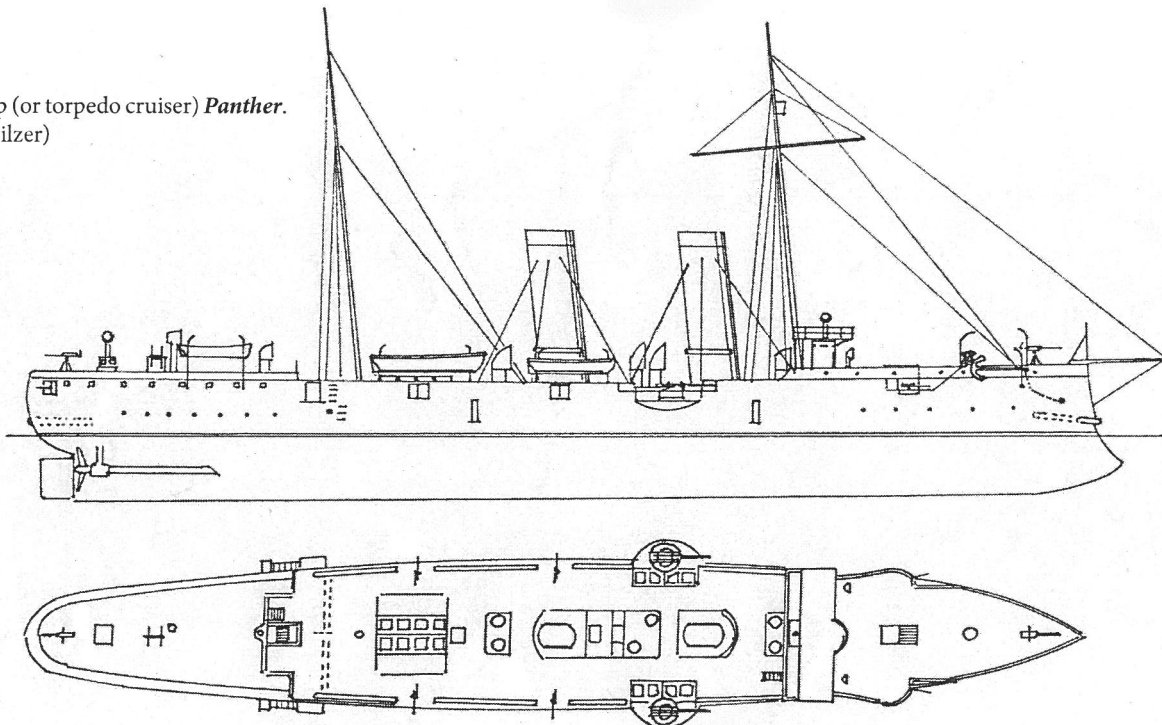
LUSSIN was after her completion and trials sent to a training cruise into the Western Mediterranean, visiting Tarento, Messina, Catania, Augusta, and Syracuse between 28 February and 30 April 1885. Afterwards she was intermittently in service and reserve; in 1886, she visited with the Squadron Corfu, Salonika, Skiathos and the Souda Bay on Crete, to blockade the harbor of Volos during local Greek-Turkish clashes. She served as a training ship and suffered several accidents; **Lussin** collided with a coastal sailing ship on 9 May 1890, with the torpedo boat **XXII** on 7 November 1893, and she stranded on the northern cape of the Koločep Island on 18 February 1894, to be salvaged with help of **Sebenico**. She cruised in Greek waters again in 1898, to serve later as the auxiliary ship of the Torpedo School, and for trials for the underway replenishment (with coal). Between 1904 and 1908, she served as the training ship and stationary in Boka, to be rebuilt as an Admiralty Yacht between 1910 and 1913, replacing the old yacht **Fantasie**. She received new diesel engines of the Augsburg-Nürnberg-Maschinenfabrik A.G. (as the first A-H naval surface vessel powered with diesel engines) and new screws, and her armament was reduced to only four 47 mm guns. She took part on the Fleet funeral procession, escorting from Ploče to Trieste the battleship **Viribus Unitis** with the coffins of Archduke Franz Ferdinand and his spouse Sofia (being killed in Sarajevo in June 1914, what provoked the World War One). From 1915 to 1918, **Lussin** served as the floating barracks for the German submarines' crews in Pula. She was ceded to Italy in 1920 and renamed **Sorrento**, to serve initially as the supply ship for Italian motor torpedo boats (MAS), and from 1924 onwards as a passenger vessel in the Bay of Naples. She was stricken in 1928 and scrapped.

Bow torpedo tube on **Lussin**. (Atlas T. U.)

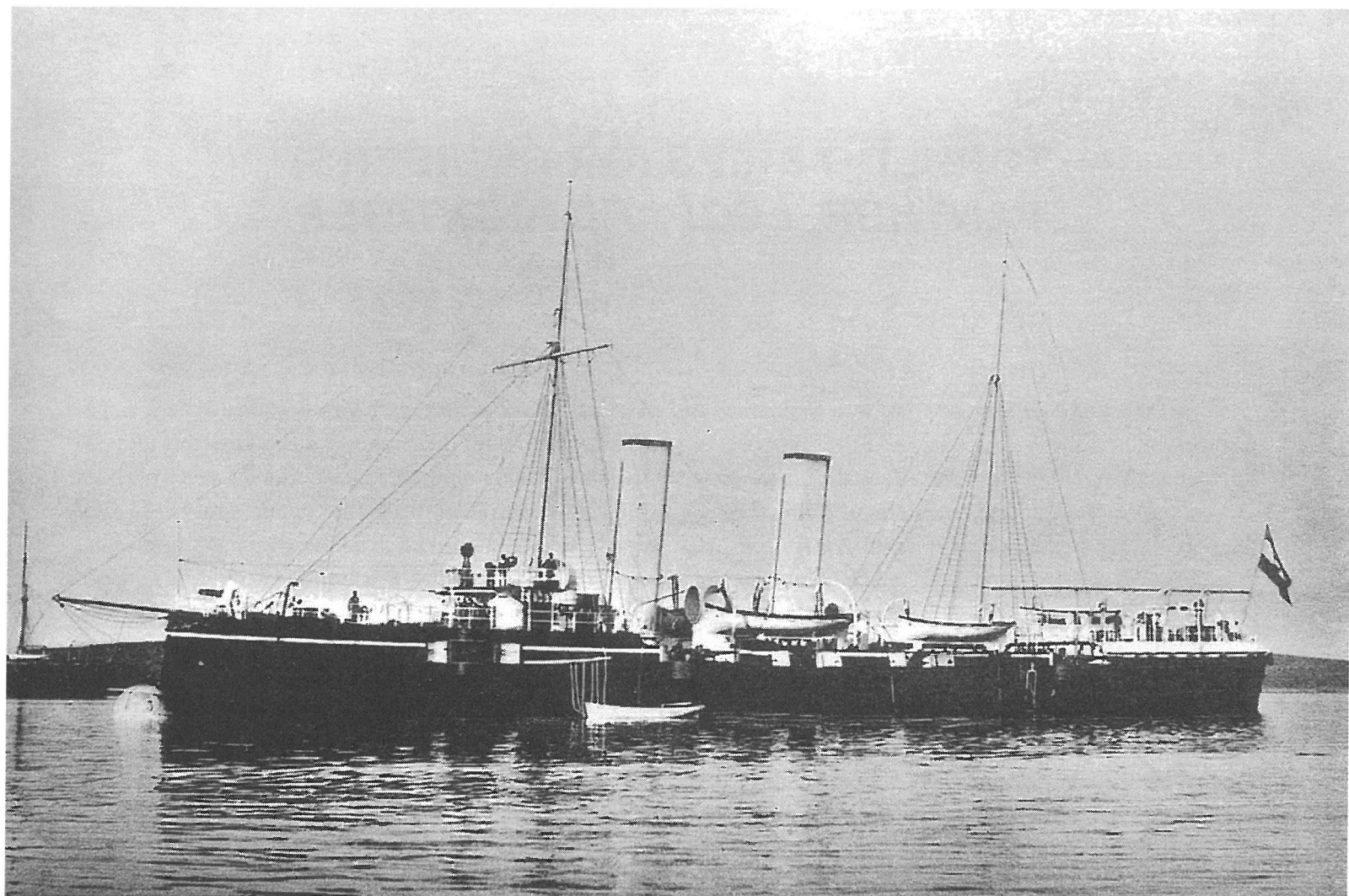
TORPEDO SHIPS (OR CRUISERS) *PANTHER, LEOPARD AND TIGER*

Since 1875, first A-H torpedo boats were built, small and fast steam powered boats with bow or trainable deck torpedo tubes, but in 1884 the Imperial and Royal Navy was missing larger vessels for their support, as four existing torpedo ships were not fulfilling the expectations at all. Thus vessels with at least 1,500 tonnes displacement and a speed of about 17 knots were asked, and after opinion of Admiral Maximilian Daublesky von Sterneck, the contemporary C-in-C of the A-H Navy, it was necessary to build at least three new “torpedo ships” with better characteristics than the existing ones. Sterneck was proponent of French “Young School” (*Jeune École*) that believed that ironclads could be replaced by smaller and cheaper armored cruisers, torpedo cruisers and torpedo boats. As Austro-Hungarian shipyards were still lacking experience with this type of ship, five British shipyards were asked to submit their offers, and finally (also because of the low price!) the offer of the Armstrong, Mitchell & Co war accepted but with small modifications. The result were torpedo ships or small torpedo cruisers *Panther* and *Leopard*, built between 1884 and 1886 in Newcastle, with the third slightly larger *Tiger*, built in Trieste between 1886 and 1888 after the plans were slightly modified by Eng. Popper. All three vessels and their fates are described in detail in the book on Austro-Hungarian cruisers⁶, and they took part – like other cruisers – in several overseas missions as well.

Torpedo ship (or torpedo cruiser) *Panther*.
(After F. F. Bilzer)



⁶ Zvonimir FREIVOGEL, *Austro-Hungarian Cruisers in World War One*, Despot Infinitus, Zagreb, 2019



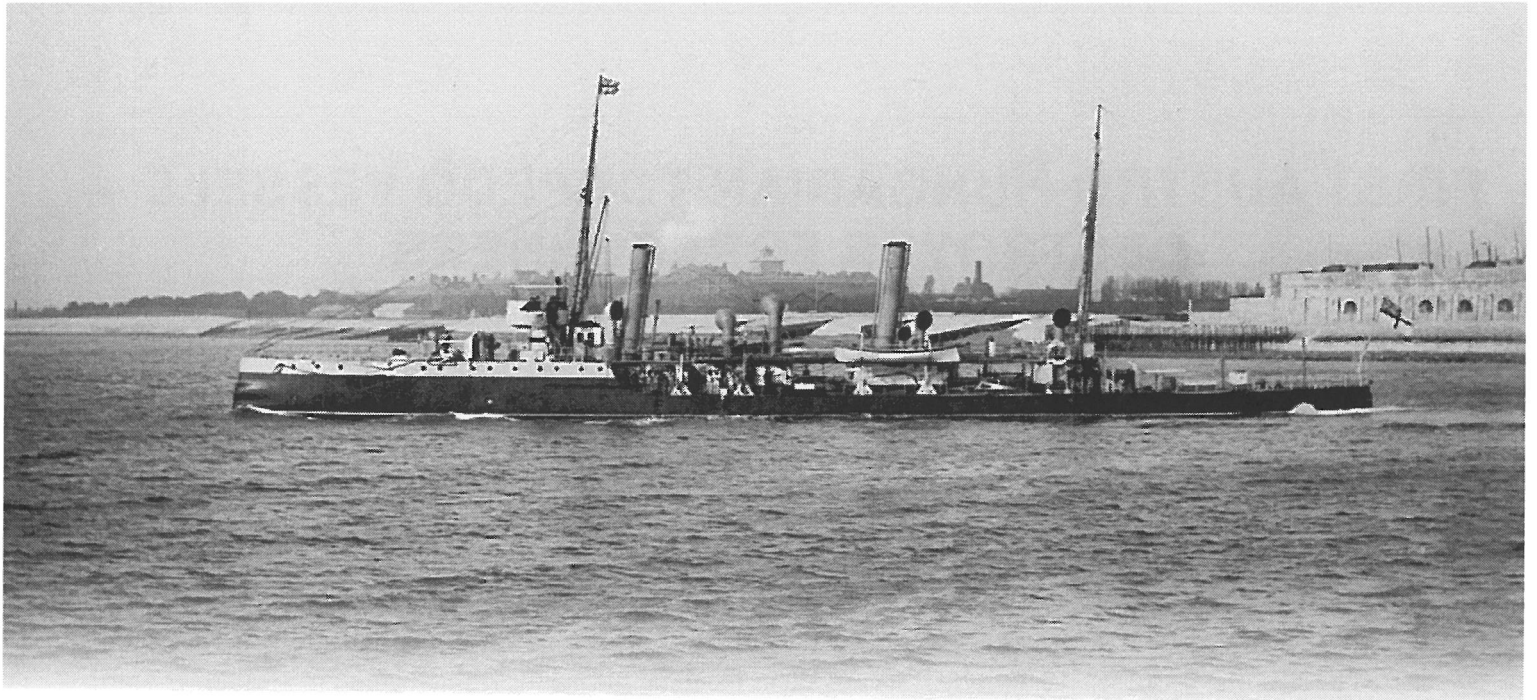
Austro-Hungarian torpedo ship or torpedo cruiser ***Tiger*** before she was rebuilt to the Admiralty Yacht ***Lacroma***. (Lemachko)

FIRST AUSTRO-HUNGARIAN TORPEDO VESSELS – DESTROYER FORERUNNERS

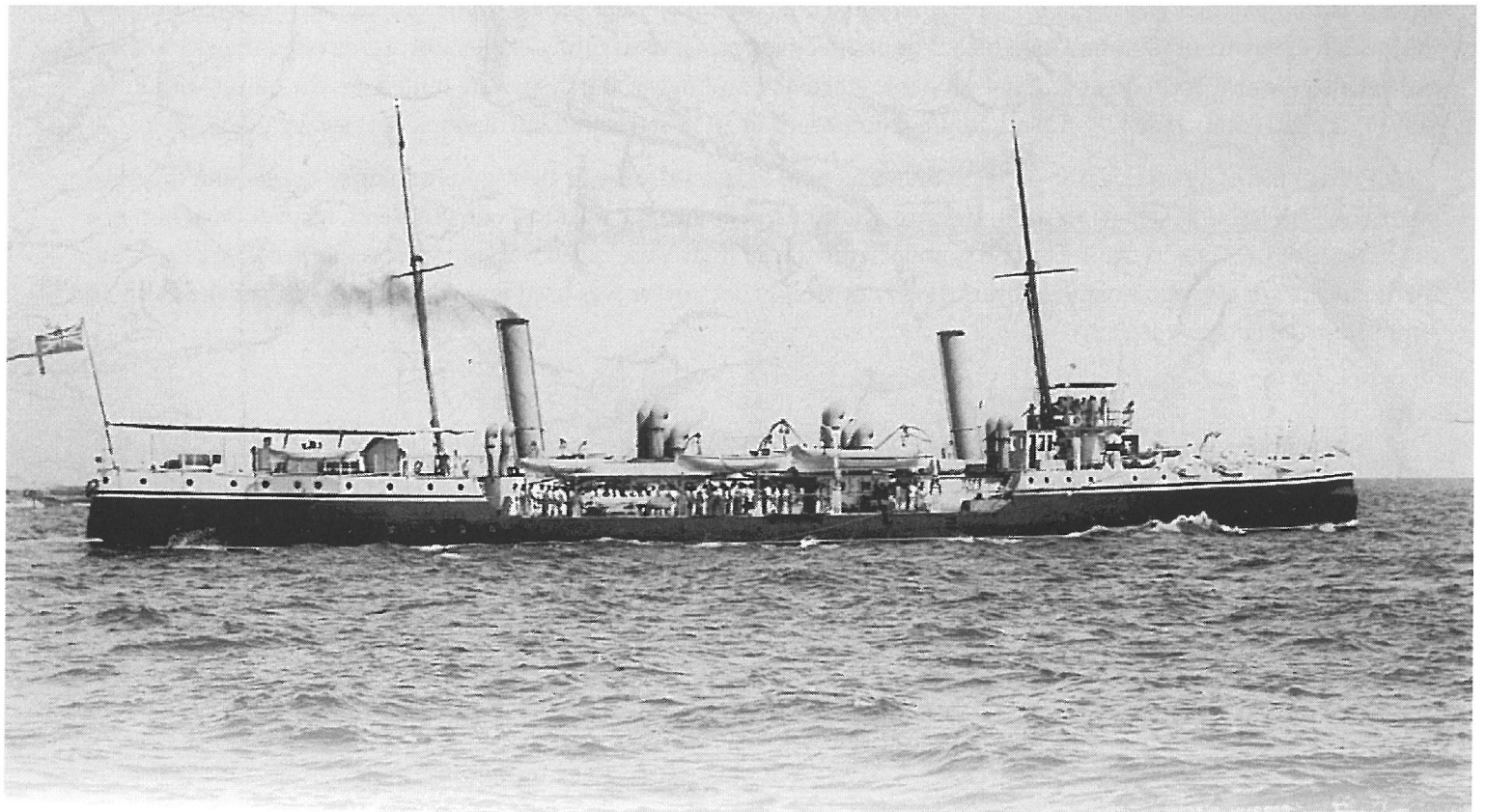
Small, fast, and agile steam torpedo boats were the most effective vessels armed with the new weapon – torpedo – that could sink strongest armored ships as well. Today it is often forgotten that ship's armor was not introduced as protection against mines and torpedoes but only against gunfire. A low strake of the armored belt was extended alongside the hull, partially above and partially below of the water line. Upper parts of the hull were protected by thinner armor or remained unarmored (likewise the parts of the hull forward and aft on some ships), and additional protection was offered by armored deck (or several decks), against shells breaking the belt or falling behind it. Smaller warships, like light cruisers, were initially protected only by an armored deck of tortoise shape. There was no armor below the armored belt, as it was known that water would slow the falling shell. Rigid armored plates were offering no protection against underwater explosions. As the danger from mines and torpedoes grew, it became necessary to protect the underwater part of the hull as well, mostly by subdivision – through longitudinal and transversal bulkheads - into numerous compartments, to limit or prevent flooding after an underwater hit. On some ships a “mine double-bottom” was installed, mostly of too small dimensions to be effective against underwater explosions. Some older larger warships carried also the anti-torpedo nets of questionable efficiency, and newer warships were built from the outset with inner (anti-) torpedo compartments and longitudinal bulkheads or were retrofitted during their service with outer *bulges*.

Another kind of defense was to increase the number of light anti-torpedo-boat-guns on larger vessels, and the third possibility was to build special ships for defense against torpedo boats, called torpedo gunboats, torpedo boat hunters, catchers, or destroyers. In the A-H naval nomenclature these ships were called torpedo vessels (*Torpedofahrzeuge*), but the English term torpedo boat destroyers (TBD) or simply destroyers was used as well, even more than the German name *Torpedobootszerstörer*.⁷

⁷ There was a complete *hierarchy* of torpedo-armed warships in the A-H Navy, beginning with torpedo cruisers (or torpedo-ram cruisers) over smaller torpedo cruisers, torpedo ships, and torpedo vessels to torpedo boats, and these were initially divided to several classes, and later to high-seas and coastal torpedo boats.



British torpedo gunboat HMS *Niger* (810 tons, two 4.7in, four 3-pounders, three torpedo tubes) was built in 1892. (Lemachko)



British torpedo gunboat HMS *Hussar* (1,070 tons, two 4.7in, six 6-pounders, five torpedo tubes) was built in 1894. (Lemachko)

TORPEDO VESSELS (DESTROYERS) *METEOR*, *BLITZ* AND *KOMET*

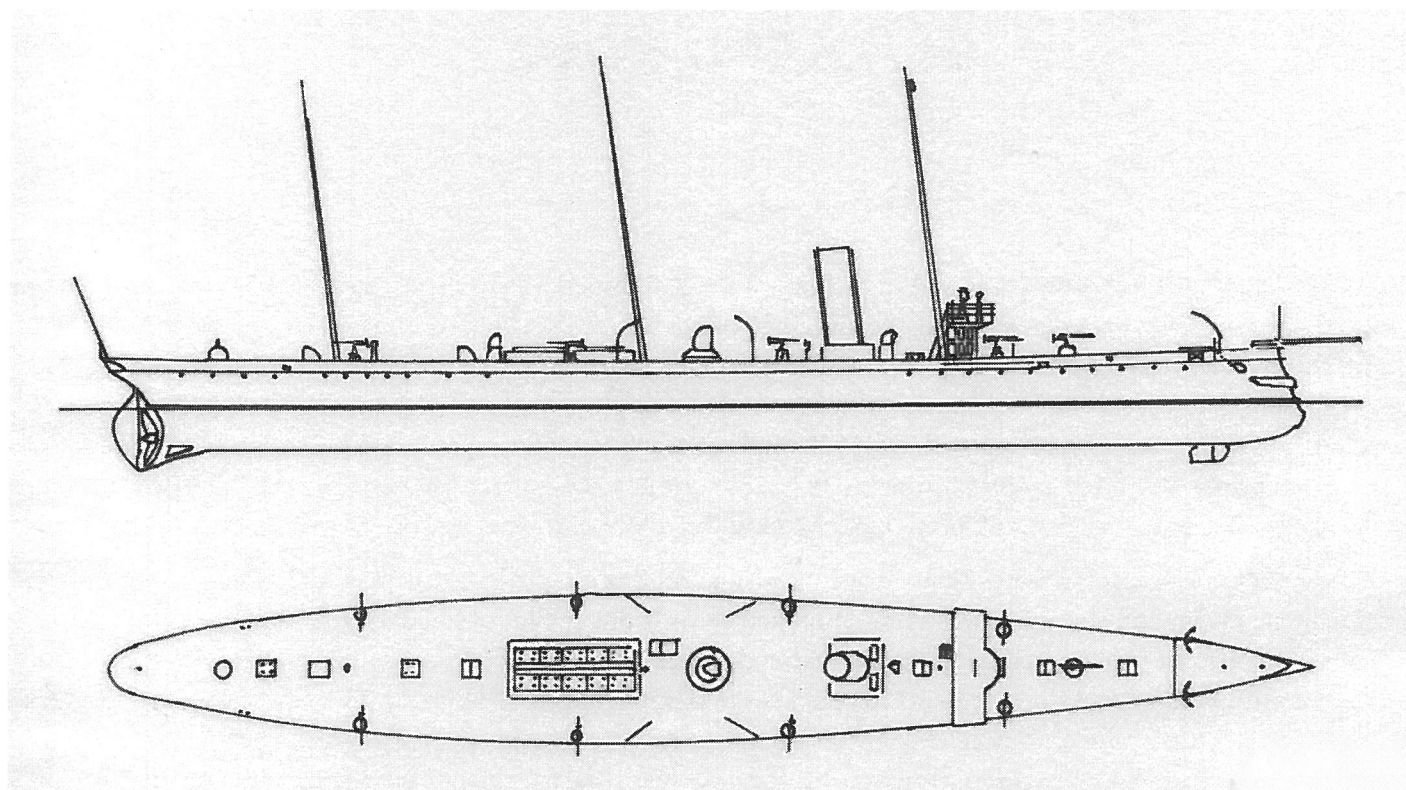
Steam torpedo boats steadily grew, and in addition to coastal torpedo boats bigger high-seas boats were built. At this time, the A-H Navy was contemplating the building of ships able to play both roles, to attack with torpedoes and to defend the own fleet against enemy torpedo boats. Shipbuilding engineer Viktor Lollok sent in 1884 to the Navy Section his proposal for a "torpedo boat hunter" with 331 tonnes of displacement and a length of 56.8 m, propelled by two steam engines with a total of 2,400 hp, with two shafts and being able to attain a speed of 18 knots. His initial design was rejected, but he was still asked to work further on it. In 1886, his new design was sent to be inspected by the German F. Schichau shipyard in Elbing (Polish Elblag of today), specialized for building of torpedo boats, and later of destroyers.

In cooperation with the Chief Engineer of F. Schichau, Lollok modified his design, the after part of the hull was made narrower, and the vessel was to be propelled by only one 2,400 hp steam engine and one propeller; the engine power was later increased to 2,700 hp, with a displacement rise of 30 tonnes. The steam was supplied by two locomotive boilers, and the vessel was to reach the maximum speed of 21 knots. The newly founded Imperial & Royal Naval Technical Committee (Marineteschnisches Komitee) criticized the project, mostly the one-shaft propulsion and cramped crew compartments, but the A-H Navy signed the building contract with the Schichau yard on 11 December 1886. In June 1887, the shipyard informed the Navy that the completion would be late, and in July it was revealed that the ship would have about 70 tonnes more displacement as envisaged; the full load displacement grew from 394.07 to 422.13 tonnes.

At launching on 15 June 1887, the vessel was christened *Meteor*, and during the first trials, on 25 August of the same year, a speed of 23.1 knots was allegedly reached. As the Navy Section was bound by the contract to pay a premium of 5,000 German Mark for each 1/10 of knot over the contracted speed, the shipyard was to receive a total sum of 105,000 Mark, reduced by 11,000 Mark for completing the vessel later than envisaged. *Meteor* arrived at Pula on 27 September 1887, but already the first trials under the A-H flag confirmed the expected deficiencies, like the cramped quarters for the NCO's and the crew (the officers' quarters were in contrast very comfortable). The ship was taking too much sea water aboard because of her low deck, when sailing directly or obliquely into wind and waves (and more spray was caused by the forward torpedo tube, protruding from the bow, and slamming into the waves). All three masts vibrated strongly at speed, and they were too weak for the envisaged rig with a sail area of 200 square meters. In 1904, two masts were removed, and only the foremast remained aboard. The gun armament (of only nine 47 mm L/44 guns) was also seen as too weak. During trials on the Adriatic, the only 19.7 knots could be reached, and thus the shipyard was paid the premium for nothing!

In spite of these deficiencies, it was decided to order two more similar ships in Elbing, being about two meters longer, with a slightly raised and widened foredeck, to reduce the amount of water being shipped forward. The contractual speed of 22.5 knots was guaranteed by the shipyard. The keels for these two vessels, with names *Blitz* (Flash) and *Komet* (Comet) being approved on 20 February 1888, were - because of a long winter - laid only on 23 February and 21 April 1888 respectively. They were launched on 7 July and 18 August respectively and completed on 22 October

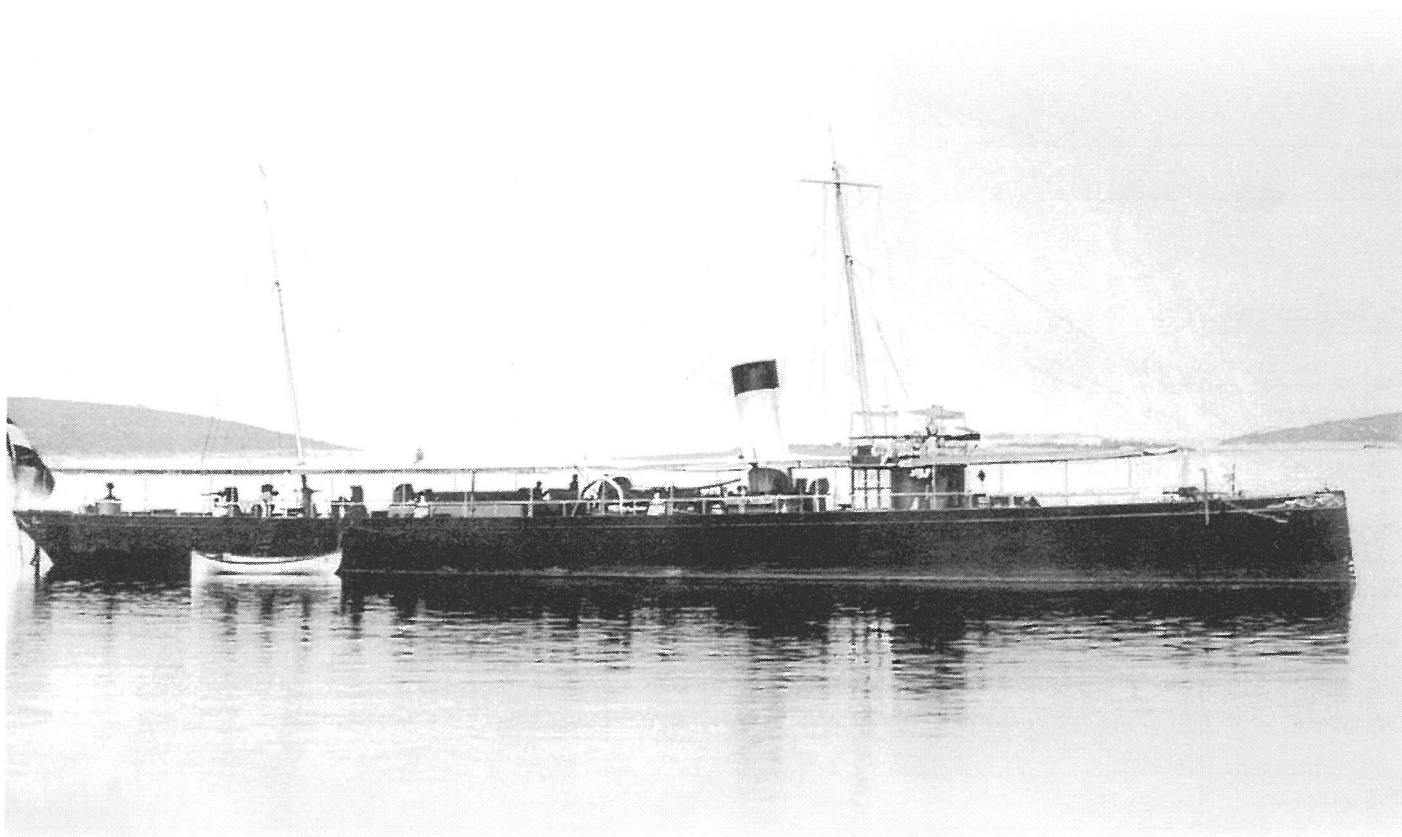
and 6 November of the same year. One A-H naval officer was sent to Elbing to supervise the speed measurement and the pressure of the boilers; on first trials on *Blitz* in late August and early September, a speed of 20.4 and 21.5 knots was reached. After the diameter of propellers was enlarged to 3 meters and some details on the stern were modified, *Blitz* reached a speed of 21.7 knots, and *Komet* (where no modifications were made) a maximum speed of 21.73 knots.



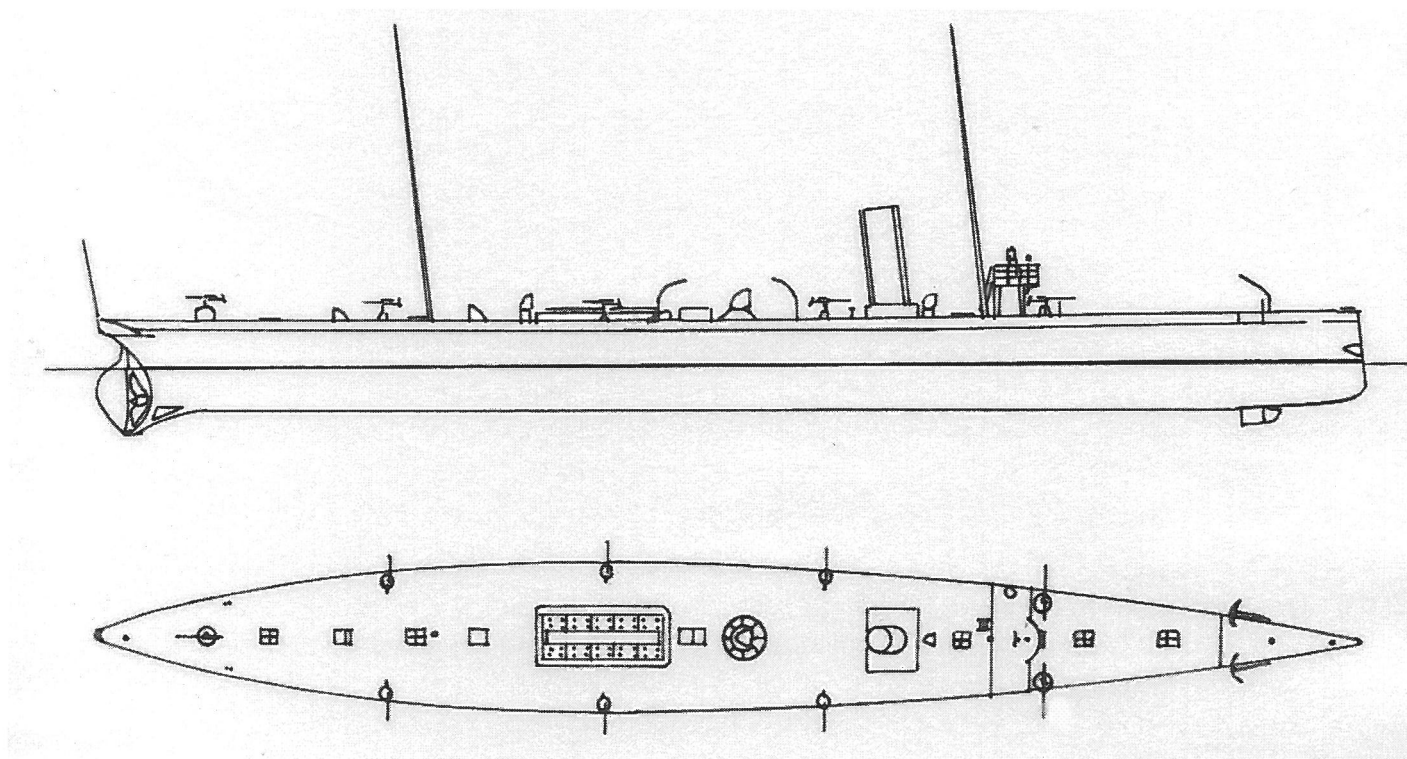
Torpedo gunboat or torpedo vessel (destroyer) *Meteor* in 1887. (After F.F. Bilzer)

All three vessels were flush-decked, without raised forecastle and poop; the hull of *Meteor* was 58.74 m long, and of *Blitz* and *Komet* 60.68 m. The hull of *Meteor* had a beam of 7.4 m, with 7.42 m on *Blitz* and *Komet*. The draught of *Meteor* laid between 2.11 and 3.06 m, and on the other pair between 2.11 and 3.14 m. The design displacement of *Blitz* and *Komet*, with 360 tonnes, was similar to *Meteor* but the full load displacement was reduced to 420 tonnes. In contrast to the three-mast *Meteor*, *Blitz* and *Komet* had only two masts, and the foremast was – as on *Meteor* – stepped aft of the low bridge. The steam machines on *Blitz* and *Komet* had a total output of 2,900 hp, for the already mentioned speeds. All three vessels were having additional bow rudders, typical for all fast warships built by the Schichau shipyard, to improve their maneuverability.

Blitz and *Komet* were also armed with a single bow torpedo tube, mounted above the water line, together with two 47 mm L/44 and seven 47 mm L/33 mm guns. After modifications carried-through between 1904 and 1908, *Blitz* was armed with only eight 47 mm guns (two L/44 and six L/33), and in place of the ninth gun, the second (trainable) deck torpedo tube was mounted aft. *Komet* was similarly rebuilt, to be extensively modified in 1913/14 and reboilered with two Yarrow water-tube boilers, having two funnels afterwards. The first forward pair of 47 mm guns was later replaced by two forward 7 cm L/45 guns, and smaller torpedo tubes forward and aft were replaced by two 45 cm (17.7in) trainable deck torpedo tubes, one forward, and another aft. On the stern, forward and aft of the mainmast, transversal minelaying rails were installed.



Torpedo vessel (destroyer) *Blitz* in 1888. (Lemachko)



Blitz and *Komet*, initial appearance. (After F. F. Bilzer)

	Shipyard	Keel laying	Launching	Completion
<i>Meteor</i>	F. Schichau, Elbing	Dec. 1886	15/06/1887	31/08/1887
<i>Blitz</i>	F. Schichau, Elbing	23/02/1888	07/07/1888	22/10/1888
<i>Komet</i>	F. Schichau, Elbing	21/04/1888	18/08/1888	06/11/1888

Tactical and technical data

	<i>Meteor</i>	<i>Blitz</i> & <i>Komet</i>
Displacement	As designed 360 ts, maximum 422 ts.	As designed 360 ts, maximum 420 ts
Dimensions	58.74 x 7.4 x 2.11/3.06 m.	60.68 x 7.42 x 2.11/3.14 m.
Propulsion	One 3-expansion steam machine, 2,700 hp; 100 tonnes of coal.	One 3-expansion steam machine, 2,900 hp; 100 tonnes of coal.
Speed	Average 19.7 knots.	Maximum 21.04 kts (<i>Komet</i> 20.65 kts).
Range	1,455 miles/16 or 3,400 miles/11 kts.	1,513 miles/16 kts or 3,570 miles/11 kts.
Armament	Nine 47 mm L/33, one torpedo tube; later: one 7 cm L/45, six 47 mm L/33, one 8 mm mg, two 35 cm (14in) torpedo tubes.	nine 47 mm (two L/44 and seven L/33), one torpedo tube; later: eight 47 mm and two 35 cm t.t. (<i>Blitz</i>) or two 7 cm L/45, six 47 mm, and two 45 cm t.t. (<i>Komet</i>).
Complement	60 (five officers).	60 (five officers)

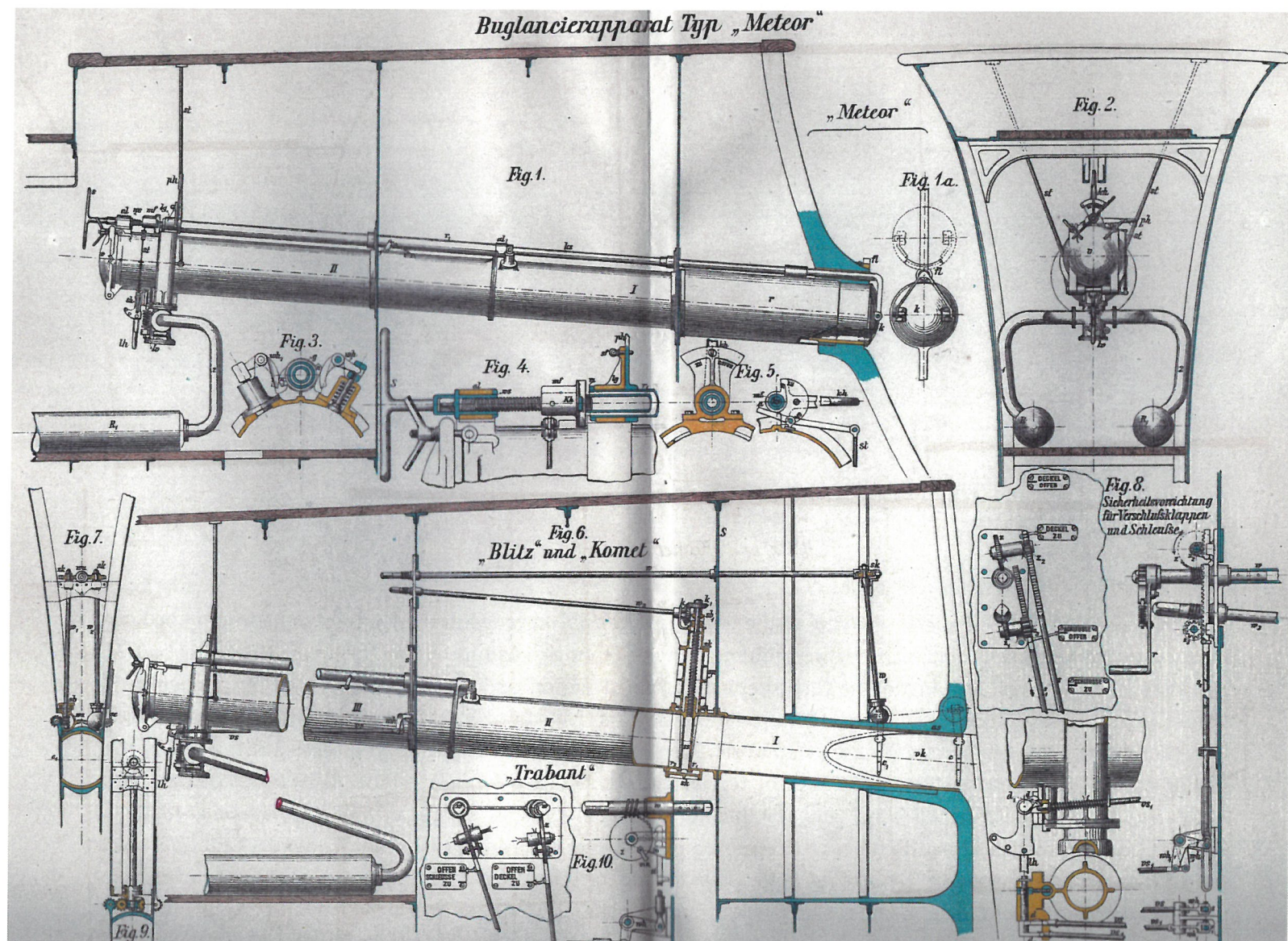
SERVICE AND FATES

After being commissioned and after other trials on the Adriatic on 12 March 1888, *METEOR* was sent with the Squadron to the Western Mediterranean to visit Barcelona between the 11 and 26 May. She was later intermittently in active service and in reserve. In 1898, *Meteor* was equipped as a minelayer, served with the Naval Academy in Rijeka between 1 October 1902 and 1904, and later with the Summer Squadron. On 13 September 1904, she was disarmed and rebuilt: the main and mizzen masts were removed, and one trainable 14in torpedo tube mounted aft. *Meteor* served for cartographic survey along the Dalmatian coast, and later as the station ship in Šibenik, Lošinj, and Tivat. After new boilers were installed, the machinery power fell to 2,242 hp and the speed to 17.31 knots. At the begin of the World War One, *Meteor* served as an auxiliary dispatch vessel of the Cruiser Flotilla, under KK⁸ Wilhelm von Ende, and later as a part of coastal defense in Pula, belonging to the 9th Destroyer Group of the 16th Torpedo Division, together with *Planet*, *Trabant* and *Satellit*. She was escorting convoys as well. Her new CO was KK Josef Posarelli von Mersperch, being succeeded later by KK Gustav Klima. After the war *Meteor* was ceded to Italy in 1920 and scrapped afterwards.

BLITZ was armed after arriving at Pula on 23 December 1888, she was part of the Summer Squadron in 1889, and served later intermittently in the active service and reserve. In 1897, she took part in the blockade of Crete and was stationed in Candia. Early in 20th Century, *Blitz* was attached to the Naval Academy in Rijeka as a training ship, and in 1903, her aftermost 47 mm gun was replaced by a trainable torpedo tube. She served later as a harbor ship in Šibenik and Boka kotorska, and as the World War One broke out, *Blitz* was still in Boka and chased (together with the destroyer

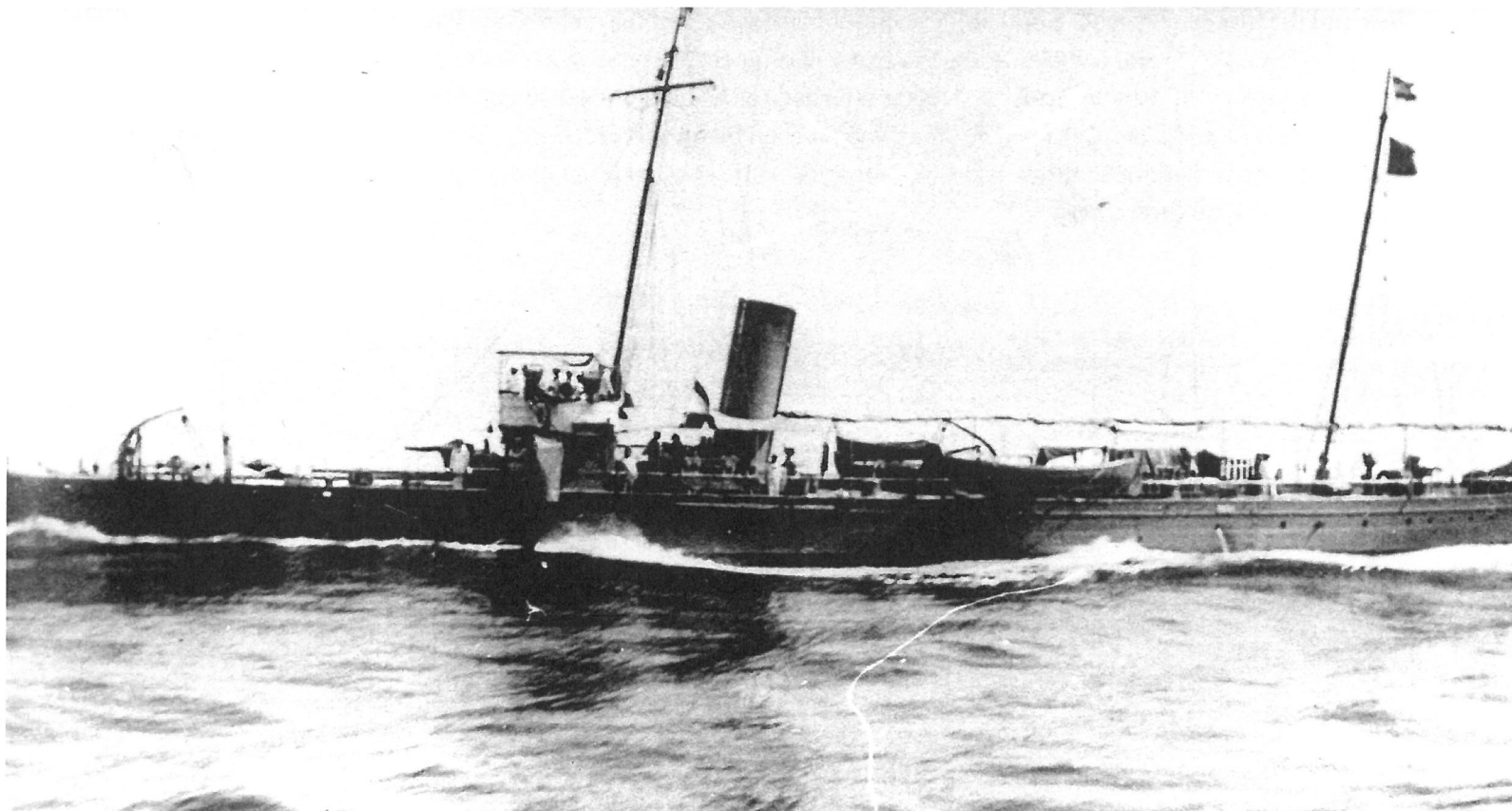
⁸ KK = Korvettenkapitän (see the Attachment V).

Ulan and the torpedo boats 57 T and 36) French submarine *Cugnot* that entered the bay on 29 November. CO of *Blitz* was at this time KK Armin Schöller. *Blitz* was again chasing enemy submarines sighted in Boka on 19 and 30 January, and 4 February 1915⁹. Late in April 1915, *Blitz* returned to Pula to be overhauled there, serving later for mine transports to Boka. In 1917, her CO was KK Franz von Stecher, being succeeded in 1918 by KK Maurus Fabro. The vessel was intermittently stationed in Pula and Boka, escorted some convoys along the coast, and was ceded to Italy in 1920, to be scrapped soon thereafter.



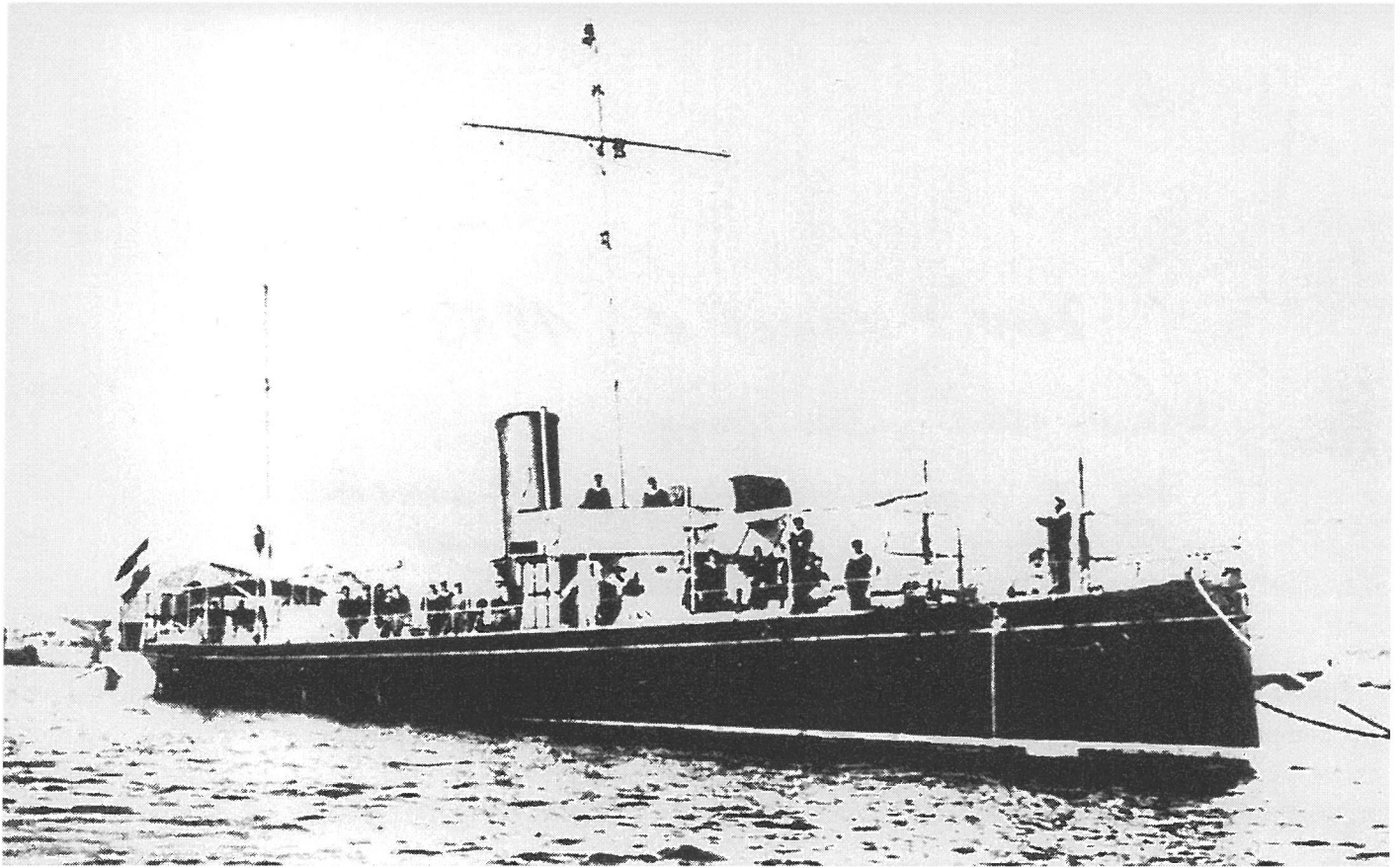
Bow torpedo tubes on *Meteor*, *Blitz*, and *Komet*. (Atlas T. U.)

⁹ According to French sources, like GARRIER, *L'Odyssee*, Tome 3, p. 72), only the submarine *Monge* was patrolling near on 19 January 1915, but in front of Boka kotorska, not inside.

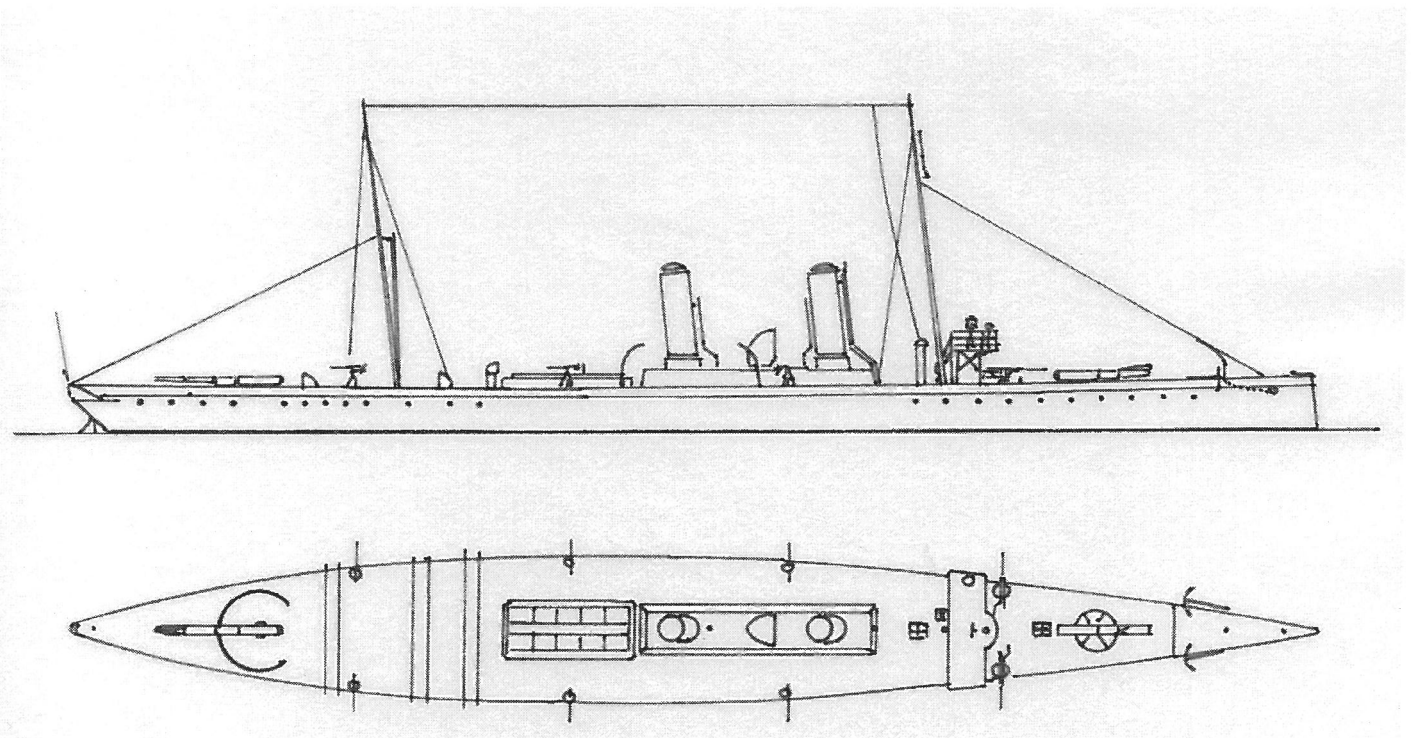
Torpedo vessel (destroyer) *Blitz*. (Baumgartner)

After being completed and after arriving to the Adriatic, *KOMET* served with the Summer Squadron, to be later attached to the Machinery School, being intermittently in active service and in reserve. Between 31 August and 22 December 1896, she was the leader of the Torpedo Boat Training Division, and between 10 April and 16 October 1897, *Komet* was stationed in Candia on Crete. There followed new service and reserve periods; *Komet* received her deck torpedo tube in 1904, served as a training ship of the Naval Academy in Rijeka, later with the Squadron and as the harbor ship in Tivat. Between 1912 and 1914, she received new boilers and funnels in Pula. *Komet* served afterwards as a part of the local defense of Šibenik, and searched for mines off Split and Vis, under KK Otto Bäuml as her new CO. The bow and the deck torpedo tubes were removed in 1915 and replaced by two single 45 cm deck tubes. *Komet* stranded on the Dužac island on 14 October 1915, when towing the torpedo boat *25*, but was salvaged with help of the tugs *Herkules* and *Gigant*. After being repaired, she stranded again near Artatur on Lošinj, when towing the torpedo boat *14*. She was salvaged with the help of the destroyer *Magnet*, was repaired, and served as a harbor vessel in Šibenik. Her CO was at this time KK Josef Zaffauk von Orion. On 19 May 1917, she was attacked but missed near Cape Ploče by French submarine *Le Verrier*.

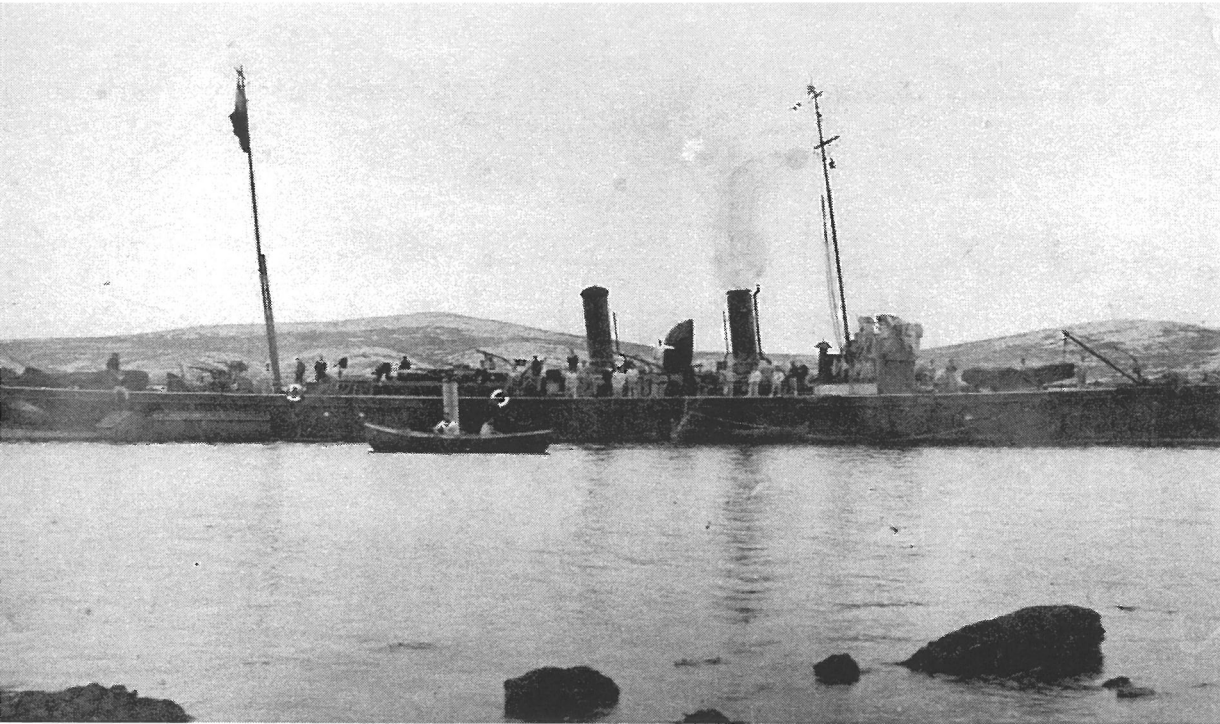
In February 1918, *Komet* was rearmed with two 7 cm guns in place of her forward 47 mm guns. In August 1918, her CO was KK Julius Szábo de Kezdi-Polyan. *Komet* stranded again, on 28 September 1918, in the Voz Bay on the island of Krk, came free at her own power, but stranded one more time in the Murter Channel and was towed from Šibenik to Pula, to be repaired there. The repairs of the damaged rudder and screw was probably not completed before the war was over, and the vessel was ceded to Italy in 1920 and scrapped.



Initial appearance of the proto-destroyer *Komet*. (Schrott)

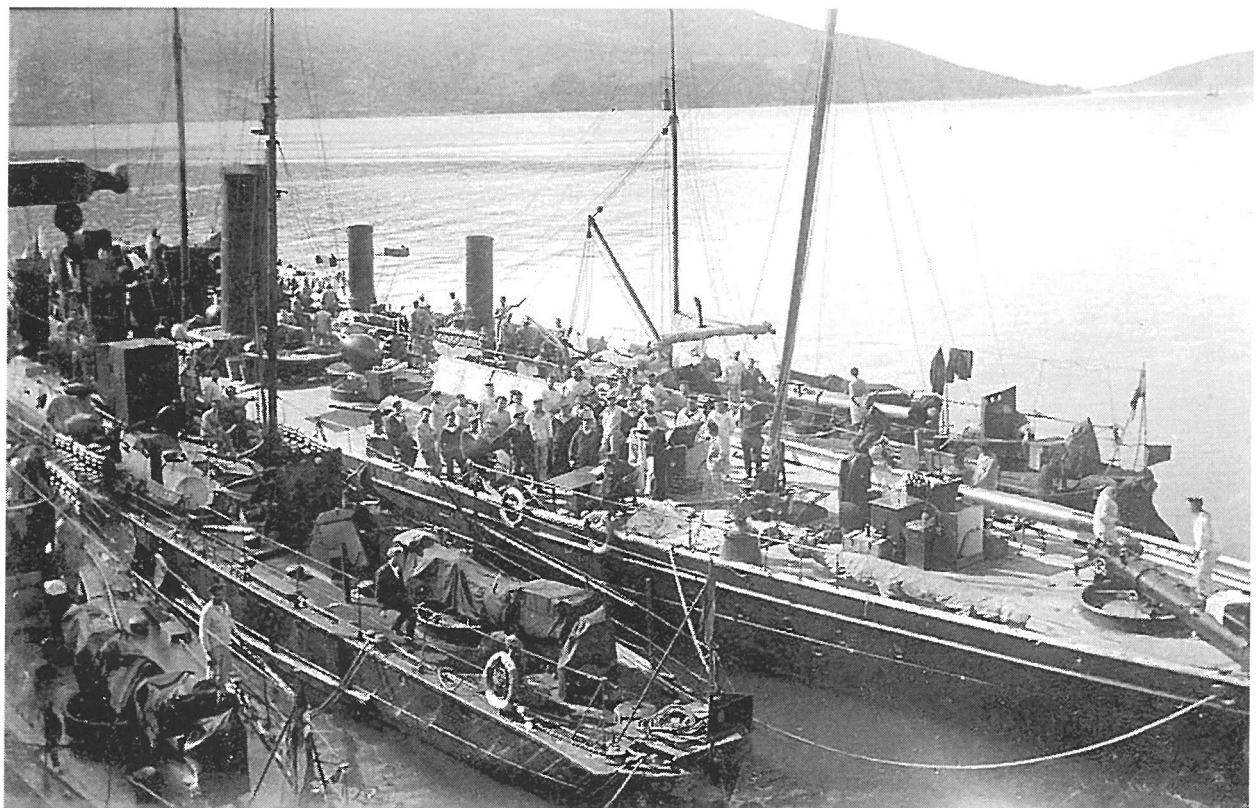


Komet with new boilers and funnels. (After F. F. Bilzer)



Destroyer-forerunner *Komet* after being rebuilt. (Baumgartner)

Three torpedo vessels of the *Meteor* class were experimental ships with poor characteristics and were transferred soon after completion to secondary duties. After some modifications they could serve as patrol or escort vessels. After long service they were ceded to Italy and demolished. They served after completion as a template for the Russian torpedo gunboats of the *Kapitenlajtnant Kasarski* class and for the Norwegian *Valkyrien*, being also built in Elbing. At this time, British shipyards were building torpedo gunboats of the *Rattlesnake* and *Onyx* class for the *Royal Navy* and the *Almirante Lynch* class for Chile. In Italy the gunboats *Folgore* and *Saetta* were built, together with the twice as large *Partenope*. Already during the building of the *Meteor* class, larger torpedo vessels with two-shaft propulsion were designed for the A-H Navy.



Blitz (in the middle) with several torpedo boats. (Schrott)

TORPEDO VESSELS (DESTROYERS)

PLANET, TRABANT, AND SATELLIT

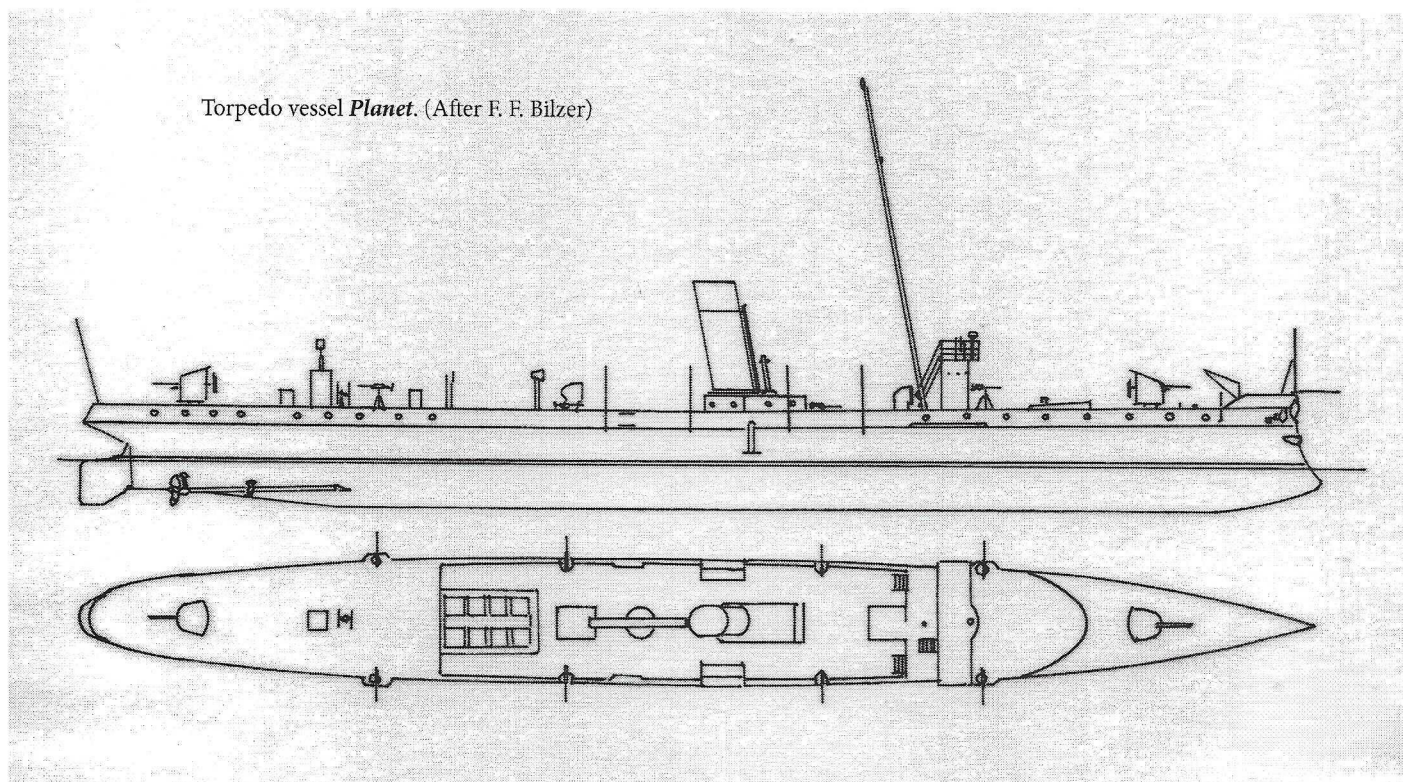
During the design process of the first A-H torpedo vessels, there was a clearly visible competition between Chief Shipbuilding Engineer Soyka and Higher Engineer Lollok. On 4 November 1884 Soyka was promoted as the Chief of the 4th (Shipbuilding) Department of the Navy Section, being thus a superior of Lollok. As a result, Lollok's first design of *Meteor* was rejected in 1884, and the building approved only in 1886. The conflict continued during the design phase of twin-shaft torpedo vessels, the future *Planet* and *Trabant*, and Soyka was in the meantime - in 1885 - promoted as the Chief of the 1st Department of the newly founded Naval Technical Committee (MTK). In this function he designed a new torpedo boat hunting vessel (*Torpedoboots-Jagdschiff*) with a displacement of 480 tonnes and submitted the project to the Navy Section. It was immediately accepted, but with Lollok's design for a 430-tonnes-vessel as well, being similar to *Meteor*, but propelled by two shafts.

Comparison table for the two-shaft torpedo vessels

	Design Soyka/MTK	Design Lollok
Displacement	As designed 491.5 tonnes, trial displacement 475.7 tonnes.	As designed 430 tonnes.
Dimensions	63.9 x 7.02 x 2.58 m.	62 x 7.3 x 2.26 m.
Propulsion	Four locomotive boilers, two shafts, 3,500 hp.	Two water-tube boilers, two shafts, 3,600 hp.
Speed	20.5 knots.	21 knots.
Fuel	104.6 tonnes of coal.	102 tonnes of coal.
Armament	Two 57 mm, eight 47 mm, one bow torpedo tube.	One 8,4 cm, seven 47 mm, one bow and one deck torpedo tube.
Complement	?	?

The Navy Section sent both designs to several shipyards, like the S. T. T. in Trieste, F. Schichau in Elbing, British shipyards Armstrong, Mitchell & Co., J. & G. Thomson in Glasgow, Palmers Shipbuilding, and Iron Co. in Yarrow on Tyne, the French shipyard Augustin Normand in Le Havre and the Swedish Bergsunder A. G. in Stockholm and asked for offers. The S. T. T. shipyard submitted only the offer for the 480-tonnes-vessel (of the Soyka design), as according to their opinion, the 430-tonnes-vessel (designed by Lollok) could not reach the speed of 21 knots with the envisaged boiler pressure. In contrast, F. Schichau sent an offer for the 430-tonnes-design, but with stronger machinery, as the 480-tonnes-vessel could not reach the designed speed at only 3,500 hp. Armstrong was ready to build a ship after the Soyka design, but with more powerful engines, the Thomson shipyard sent an offer for the same project, but with some modifications in appearance, and only the Palmers shipyard was ready to build a 480-tonnes-vessel without changes. The Swedish offer for a fast 260-tonnes-torpedo gunboat, built after its own design, was rejected, and French A. Normand shipyard has not submitted any offer at all.

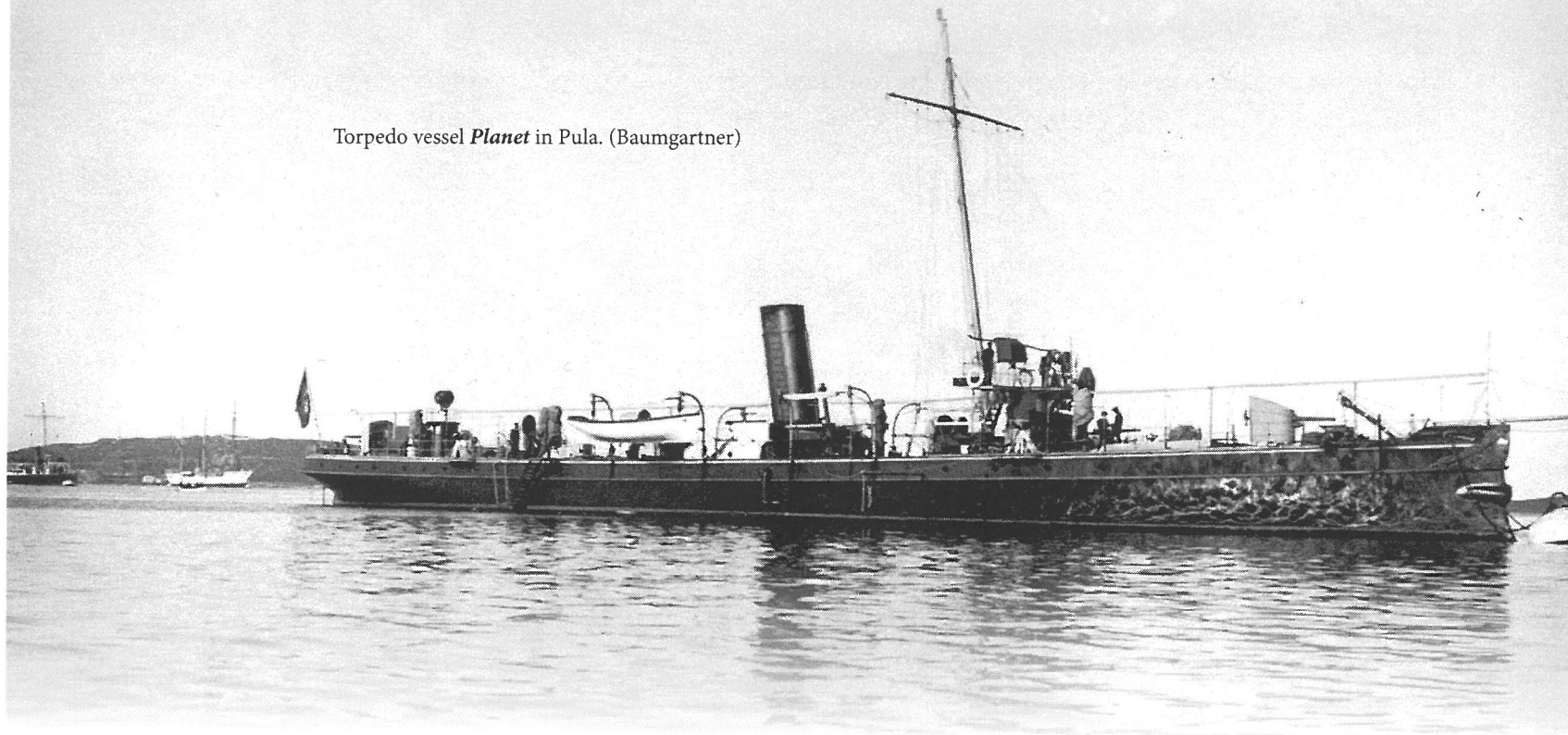
As all offers were examined, it was decided to order two 475-tonnes-vessels, one from Palmers and another from S. T. T., to gain insight into British shipbuilding technology as well. Both vessels were officially called *Vedetteschiffe* (sentry vessels) and were to be christened ***Planet*** and ***Trabant***. The building of ***Planet*** was to begin in Yarrow on Tyne in early September 1888, for a price of 420 thousand guilders, but it was soon revealed that the data computed by the MTK were wrong, and that the vessel would be about 40 tonnes heavier. The plans were modified, a displacement increase of 32 tonnes was agreed on, and the design displacement grew to 506.2 tonnes, with a full load displacement of 540 tonnes. The plans of ***Trabant***, being built in Trieste, were modified too, by Eng. Theodor Schunk, the Chief Engineer of the S. T. T. The length of the hull grew by two meters, and the building began late in July 1889. The displacement was larger than envisaged too, the design displacement reached 520.28 tonnes and the full load displacement 610 tonnes.



Planet was launched on 25 June 1889, but the completion was late, and the envisaged date of 31 August could not be held, as some parts (like the foundations of the starboard steam machine) were to be cast again. On first trials on 20 January 1890, a speed of 20.08 knots was reached; after both screws were replaced, the speed rose to only 20.57 knots. New larger boilers and bronze propellers were installed by the shipyard at their own expense, but during unofficial trials, speed between 19.16 and 19.28 knots was reached, and on the official trial run on 30 October 1891, the speed of 19.38 knots at 3.356 hp was achieved. Yet the A-H Navy took the ship over on 6 December 1891.

Trabant (another name for satellite) was launched on 21 May 1890, reaching during trials on 11 September of the same year the speed of 20.33 knots. With new propellers, the speed fell to only 20.04 knots. The S. T. T. apologized, as it was not possible to exactly compute the speed at the time as the contract was signed. S. T. T. was to build another vessel after the same design for 420 thousand guilders, but the F. Schichau shipyard offered a lower price (405 thousand guilders), and the third vessel of the class, ***Satellit***, was ordered in Germany.

Torpedo vessel *Planet* in Pula. (Baumgartner)



	Shipyard	Keel laying	Launching	Completion
<i>Planet</i>	Palmers, Yarrow on Tyne	Sept. 1888	25/06/1889	06/12/1891
<i>Trabant</i>	S. T. T., San Rocco, Trieste	July 1889	21/05/1890	26/11/1890
<i>Satellit</i>	F. Schichau, Elbing	Jan. 1892	21/09/1892	25/03/1893

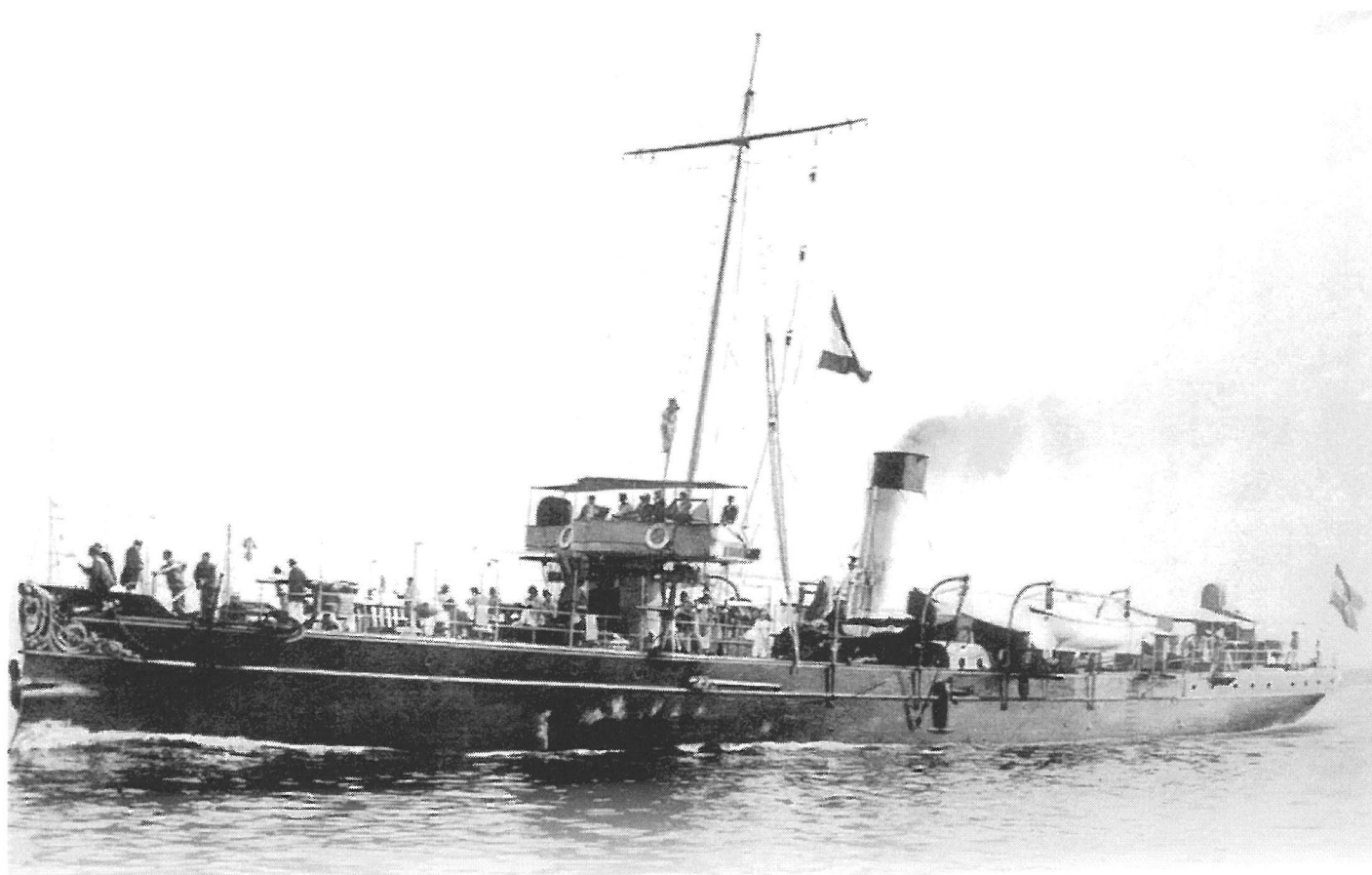
APPEARANCE AND PROPULSION

In spite of being built after a same basic design, these three vessels differed in detail.

PLANET was a flush-decked vessel at the first sight, but the middle part of the main deck was lower and enclosed athwartship by bulwarks that connected the raised forecastle with the raised poop. Forward a low bulwark was to shield the forecastle from waves and sea spray. The stem was slightly concave with slightly pronounced underwater ram, and the outer coverlid of the bow torpedo tube above the water line. The keel was straight, and the vessel had a counter stern with a single rudder. Initially the rudder was of the balance type, being replaced after a stranding in 1892 with a simpler version.

There was one 7 cm forward gun with a shield on the forecastle. On the aft edge of the forecastle the armored conning tower was raised, crowned by the commando bridge (the compass platform), extended athwartship from starboard to port. On the bridge there were the outer steering wheel, compass, machine telegraph, searchlights, and signal equipment. In front of the conning tower two 47 mm guns were mounted in the broadside, and aft of the bridge the single raked mast was erected. Amidships there was the single large and raked funnel, with the deck torpedo tube abaft the funnel. Four more 47 mm guns were mounted behind the bulwarks amidships in the broadside. On the raised poop

there was the secondary steering position with the hand steering wheel, the pedestal for the aft searchlight, two more 47 mm guns and the aft 7 cm gun with an armored shield.



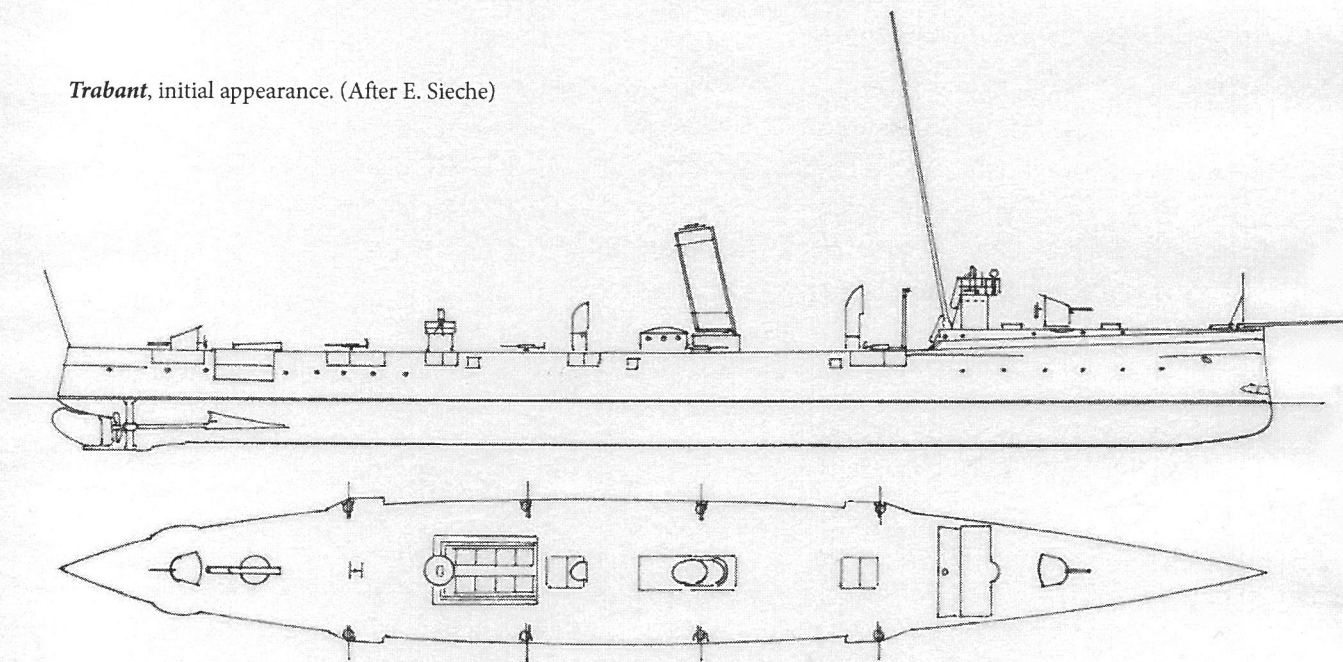
Planet in 1889. (Lemachko)

Crew quarters were arranged below the forecastle, with forward ammunition chambers below. Aft was the forward boiler room with two locomotive boilers, followed by the stokehold under the funnel, and by the aft boiler room with another two locomotive boilers. Aft the aft boiler room was the machinery room with two 3-cylinder triple-expansion steam machines. Under the poop the officers' quarters, the captain's cabin and the aft ammunition chambers were arranged. The galley was placed on the deck aft of the funnel.

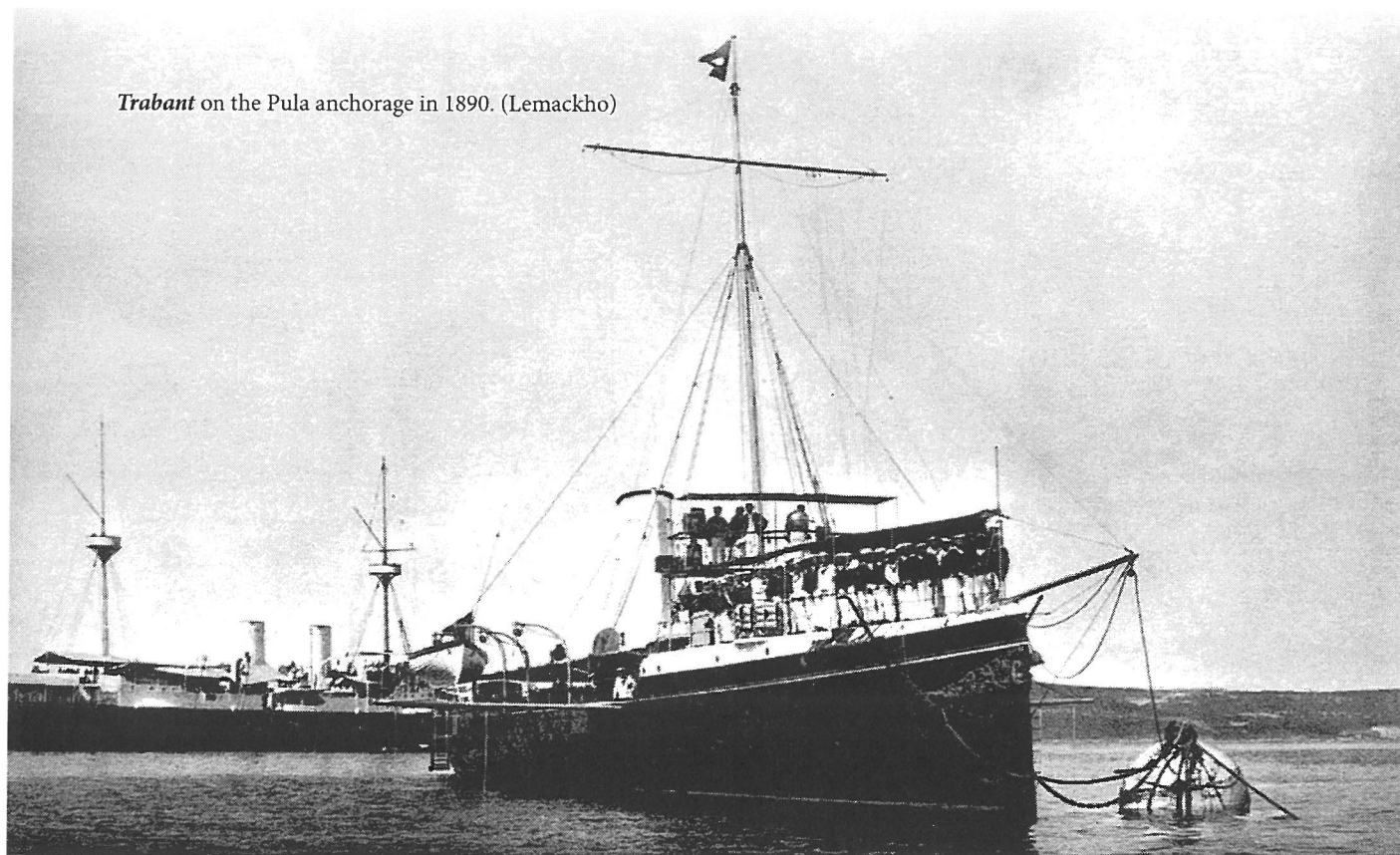
TRABANT was flush-decked, to increase the strength of the hull, but her forecastle was slightly raised, to improve the seakeeping characteristics and enlarge the crew accommodation. The inevitable armored conning tower was erected at the aft edge of the forecastle, with a compass platform/command bridge above, and the single mast abaft the bridge. One 7 cm gun was mounted on the forecastle, with another aft and all 47 mm guns in the broadside at the main deck level. Amidships there was a large and raked funnel, with small superstructures abaft, and on the aft third of the hull the searchlight pedestal, the secondary steering position, the aft torpedo tube and the mentioned aft 7 cm gun were mounted. During modifications, a deckhouse with the wireless station was installed forward of the funnel, to be connected in 1918 with the aft part of the superstructures (including galley) to form long enclosed superstructures. A low

mainmast was added as well, to carry the wireless antenna, spread between both masts. The straight stem without an underwater ram was showing no protrusion for the forward torpedo tube, preventing waves to break there and create sea spray. The keel was straight, and the stern of the cruiser type, with two screws on both sides of the rudder.

Trabant, initial appearance. (After E. Sieche)



Trabant on the Pula anchorage in 1890. (Lemackho)

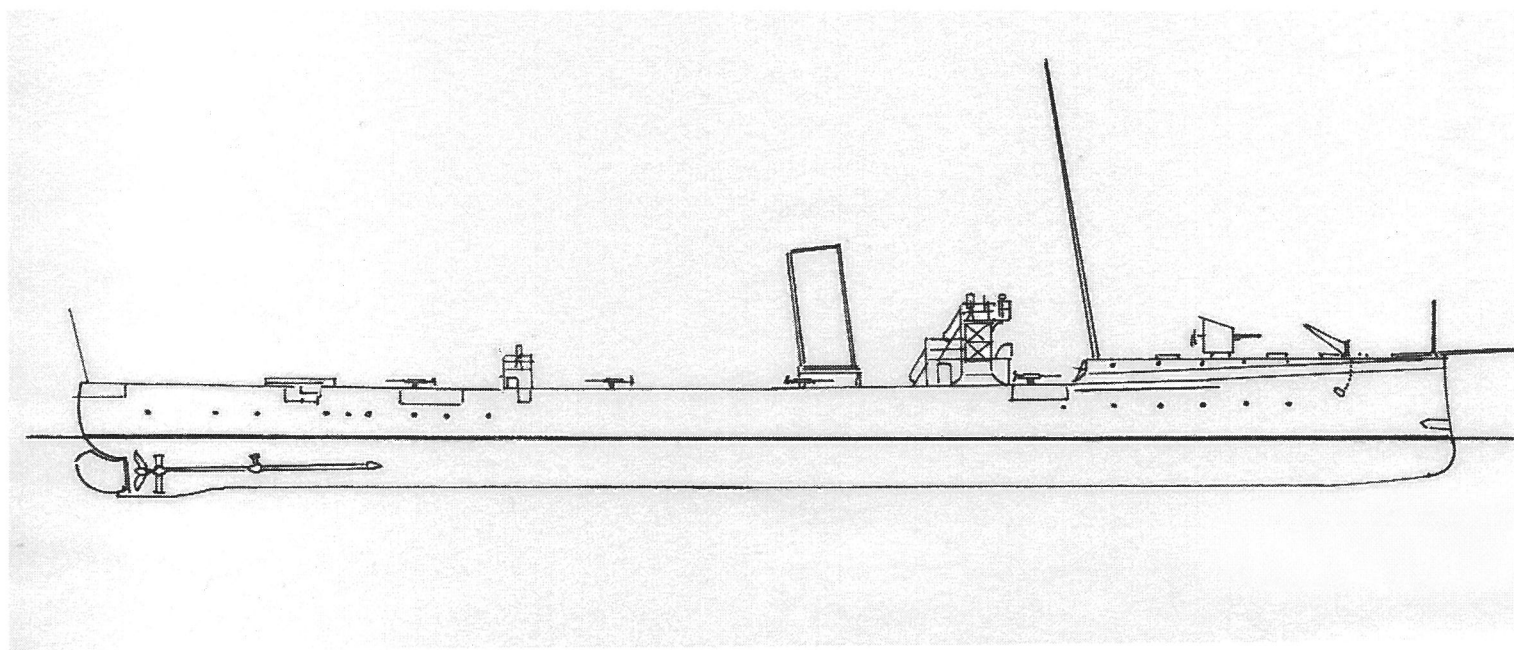


SATELLIT was a slightly improved **Trabant**, and the biggest difference was the commando bridge moved further aft, with the mast remaining on the aft edge of the forecastle. To have the same height as on the first pair, the bridge was erected above low forward superstructures. Only the forward 7 cm gun was mounted, and in place of the aft gun, **Trabant** was to carry minelaying tracks. Thus the stern was broader than on the first pair. During modernization before the WW I, **Trabant** was reboilered with three Yarrow boilers and had three smaller funnels instead of a single large one, being the only A-H destroyer with three funnels.

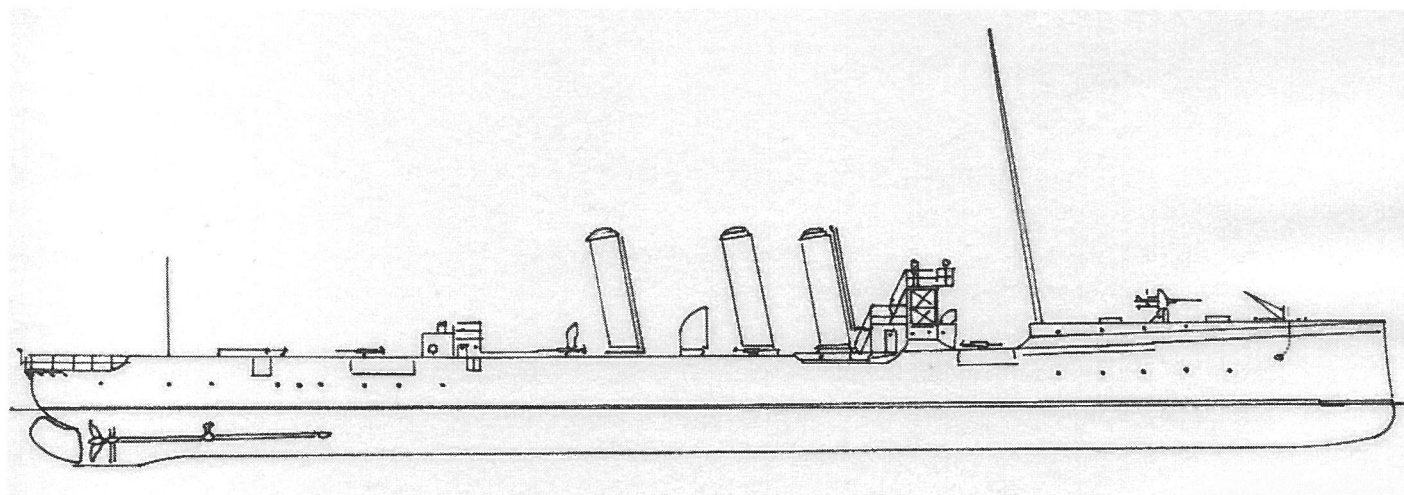
Each of three vessels had initially four locomotive boilers, to supply steam for two triple-expansion 3-cylinder steam machines. The steam machines on **Planet** were 3,356 hp strong and she reached a speed of 19.39 knots. She carried 81 tonnes of coal, for a range of 1,240 miles at 12 knots of 750 miles at 15 knots. The machines of **Trabant** developed 3,500 hp, for a speed of 20 knots, the range of 2,300 miles at 12 knots or 1,400 miles at 15 knots. The machinery of **Satellit** was the most powerful with 4,800 hp, for a speed of 22 knots. After new Yarrow water-tube boilers were installed, the power of 4,137 hp and the speed up to 21.18 knots was measured.

ARMAMENT AND COMPLEMENT

Each vessel of the first pair was armed with two 7 cm (2.6in) L/42 guns and eight 47 mm L/44 quick-firing guns, and **Satellit** with only one 7 cm L/45 K.97 and eight 47 mm QF guns. The torpedo armament was initially identical on all three vessels, but differently mounted, with one bow torpedo tube above water, and one trainable deck torpedo tube. The latter was mounted immediately abaft the funnel on **Planet** and further aft on **Trabant** and **Satellit**. Torpedo tubes on the first pair had a caliber of 40 cm (in fact 16in), and on the third vessel of 45 cm (17.7in).



Satellit, initial appearance. (After E. Sieche)



Satellit with three funnels after new boilers were installed. (After E. Sieche)

During modifications, *Planet* and *Trabant* were rearmed with new 7 cm (2.6in) guns L/44 forward and aft, and on *Satellit* the bow torpedo tube was removed in 1909 and replaced by two more trainable 45 cm torpedo tubes on ship's sides, between the commando bridge and the funnel.

Satellit was designed as the fast minelayer and could initially carry between 20 and 36 mines; this number was later increased to 60. Mine rails were installed on *Trabant* too in 1914, and she could carry up to 60 mines as well. *Planet* was during her service rebuilt for minelaying and minesweeping, and all three vessels were in the final phase of the war armed with one 8 mm anti-aircraft machine gun.

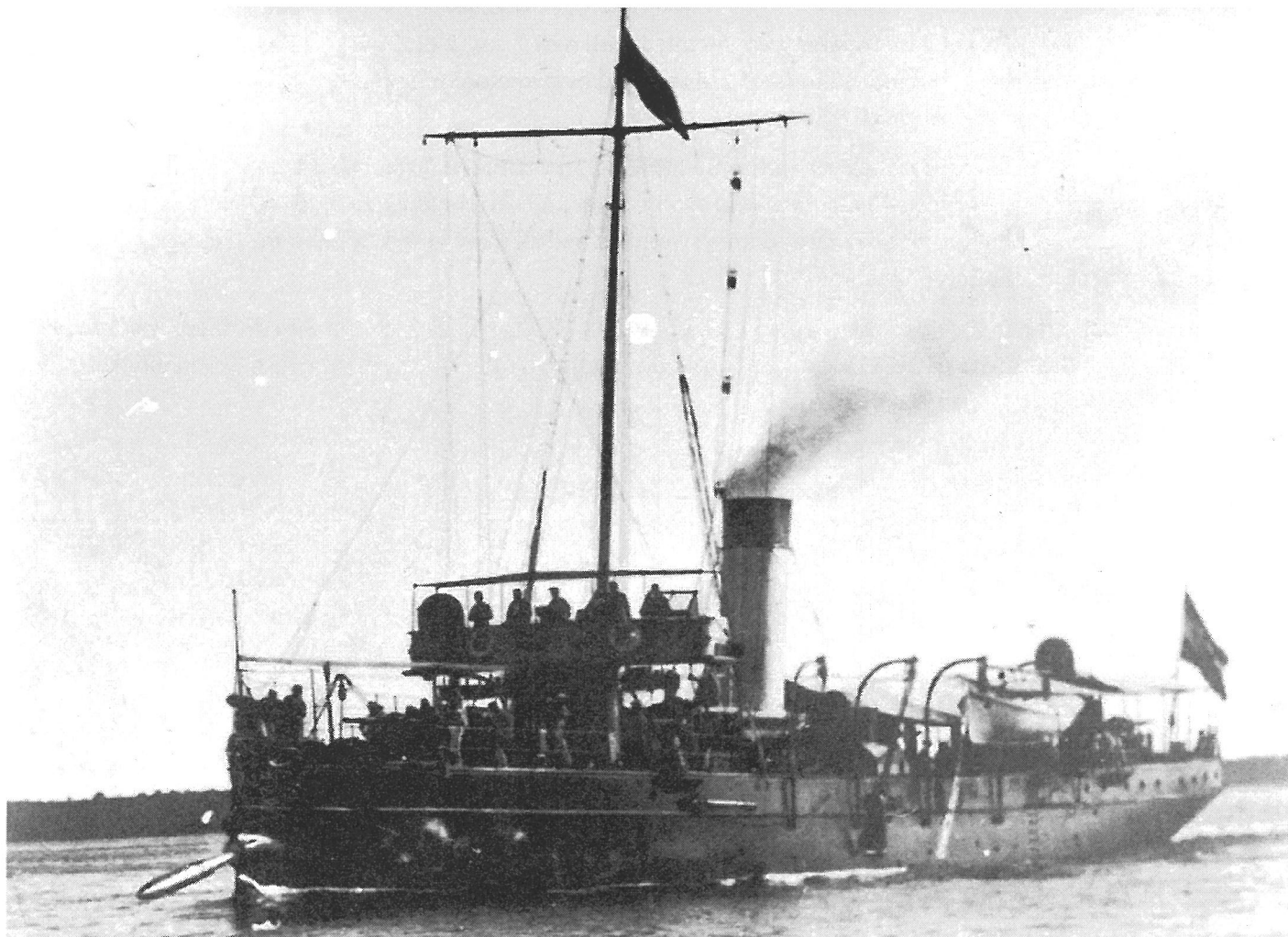
Planet and *Trabant* had a complement of six officers and 78 NCOs and sailors. On *Satellit* there was initially a complement of six officers with 64 NCOs and sailors, and during the war the complement rose to seven officers and 78 NCOs and sailors.

Tactical and technical data

	<i>Planet</i>	<i>Trabant</i>	<i>Satellit</i>
Displacement as designed	506.2 tonnes	530.28 tonnes	529.2 tonnes
Full load displacement	540 tonnes	610 tonnes	616 tonnes
Dimensions (L x B x D)	66.9 x 7.06 x 2.78 m	68.85 x 8.2 x 2.45/2.80 m	67.2/69.2 x 8.15 x 2.42/2.90 m
Propulsion	3,356 hp	2,456 – 3,500 hp	4,500 – 4,800 hp
Maximum speed	19.39 knots	20.33 knots	22 knots
Coal bunkerage	81 tonnes	136 tonnes	143 tonnes
Range (miles / knots)	1,240/12 or 750/15	2,300/12 or 1,400/15	4,000/12
Original armament	Two 7 cm L/42, eight 47 mm, two 40 cm (16in) torpedo tubes.	Two 7 cm L/42, eight 47 mm, two 40 cm (16in) torpedo tubes.	One 7 cm L/45, eight 47 mm, two 45 cm (17.7in) t. t.
Final armament	Two 7 cm L/45, eight 47 mm L /44, one 8 mm mg, two torpedo tubes (one 40 cm and one 45 cm).	Two 7 cm L/45, eight 47 mm L/44, one 8 mm mg, one bow 40 cm torpedo tube.	One 7 cm L/45, eight 47 mm guns, three 45 cm deck torpedo tubes.
Complement	Six officers and 78 NCOs and sailors.	Six and 78.	Six and 64, later six and 78.

SERVICE AND FATES

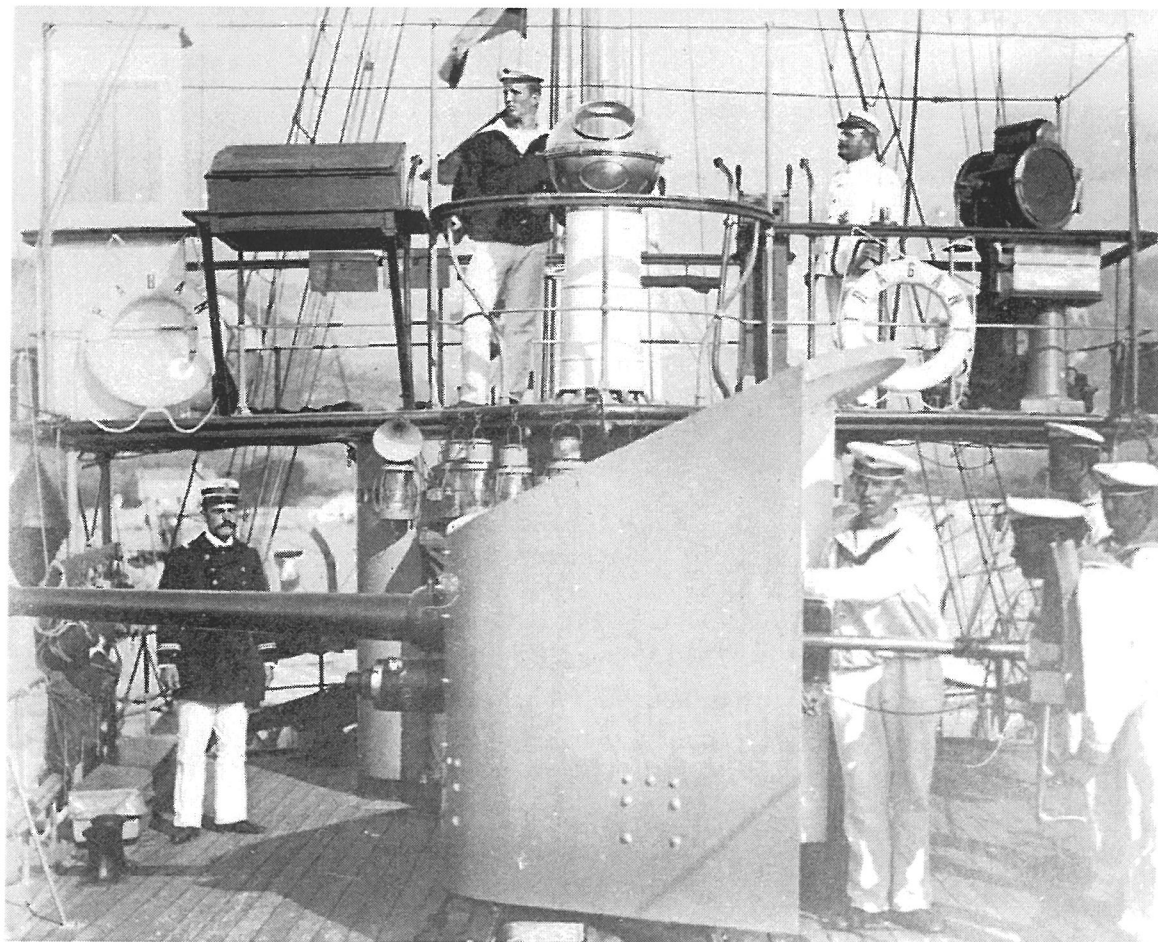
PLANET arrived from Newcastle at Pula on 6 January 1892, to receive there her guns and the aft torpedo tube. In May 1892, her damaged rudder was replaced. She served with the Squadron, intermittently in active service (during summer months) and in reserve; between January and September 1901, she was stationed in Constantinople and cruised off the Anatolian coast, to be rebuilt in 1903, receiving new boilers, side keels and new 7 cm L/45 guns in place of the older 7 cm L/42 mountings. She served later as a training ship for the cadets stationed on the training hulk **Custoza**, and later as the training ship of the Torpedo School. Until the end of the war, she was part of the Pula coastal defense, forming together with **Trabant** and **Satellit** the 11th Torpedo Vessels (Destroyer) Group of the 7th Torpedo Division. Her CO at this time was KK Raimund von Ferro. On 3 February 1913, **Planet** towed to Pula the wreck of the seaplane **E 21**, damaged by a strong gale when motoring on the surface. In 1917, **Planet** was part of the 9th Destroyer Group of the 16th Torpedo Division (together with **Meteor**, **Trabant**, and **Satellit**), under command of KK Karl Herkner. In 1918 her CO was KK Erwin Reibenschuh. **Planet** was ceded to Italy in 1920, to be scrapped soon thereafter.



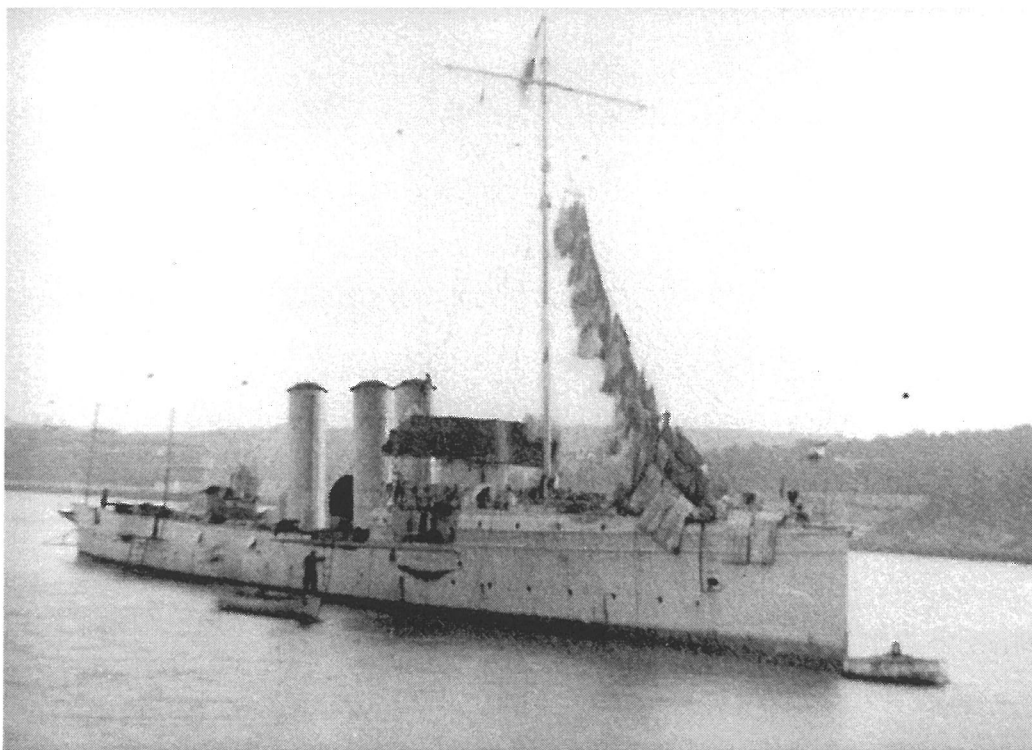
Planet during torpedo launching exercises in the Fasana Channel. (Schrott)

TRABANT was taken over by the A-H Navy in Pula on 25 November 1890, to be armed early in 1891. She took part on summer exercises with the Squadron, like in 1891, as she was to attack, together with the ironclads *Kronprinz Erzherzog Rudolf*, *Kronprinzessin Stephanie*, and *Prinz Eugen*, the cruisers *Tiger* and *Leopard*, the torpedo ship *Lussin*, and the torpedo vessels *Blitz* and *Komet*, other ships of the "defense force" formed by the yacht *Fantasie*, the cruiser *Franz Joseph I.*, the auxiliaries *Gigant*, *Triton*, and *Dromedar*, and twelve torpedo boats. In 1895, *Trabant* escorted the Cruiser Division (composed of the cruisers *Maria Theresia*, *Franz Joseph I.*, and *Kaiserin Elisabeth*), sent under Archduke Karl Stephan to the official opening of the Kaiser-Wilhelm-Canal (the later Kiel Canal, and the North-Sea-Baltic-Sea-Canal of today). Underway the ships visited Brest and Kiel, and *Trabant* steamed through the new canal to Holtenau. On its way back, the division visited Plymouth and Gibraltar, and *Trabant* was afterwards in active service and reserve. In 1905, she was reboilered, and served in the cartographic survey of the Dalmatian coast from 8 May to 18 November 1909. After two years in reserve, she served from 1912 until the outbreak of the war as the training ship of the Naval Academy in Rijeka. As the war broke out, *Trabant* was stationed in Boka kotorska and off Budva, to be moved to Pula on 4 August 1914. Her CO was at this time KK Hektor Verzeznassi. On 5 August mine rails were installed, and *Trabant* was laying mines in front of Pula on 10 and 13 August, and on 25 September 1914. On 26 September, she towed the submarine *Ub. 3* from Pula to Boka, served later as a guard ship in Portoroz and Pula, and after her machines and boilers were overhauled, she was attached to the harbor defense of Pula and remained there until the war ended. She inspected mine barrages, laid new mines, or was with other vessels sweeping the routes between minefields in search for the enemy or torn A-H mines. In August 1916, she took part in the salvage of the damaged destroyer *Magnet*, and her CO at this time was KK August Hawlik, being succeeded by KK Hans Gründorf von Zebegegyi in 1917, and by KK Emmerich von Thun und Hohenstein in 1918. After the war, *Trabant* was ceded in 1920 to Italy as well and later scrapped.

Forward 7 cm L/42 gun on *Trabant*. (Baumgartner)



SATELLIT was delivered to the A-H Navy on 25 March and arrived at Pula on 24 April 1893, to be armed there. After some trials and training firing exercises, she served with the Summer Squadron and was carrying experimental mine rails one year later. During one exercise, she collided with the old ironclad **Habsburg** (a veteran of the Battle of Lissa in 1866) and was after repairs sent into reserve. She was serving again in 1896 and 1897 and took part in the blockade of Crete (during a Greek uprising against the Turkish rule), together with the ironclad **Stephanie**, the cruisers **Panther** and **Leopard**, the torpedo vessel **Blitz**, the auxiliary vessel **Cyclop**, and eight torpedo boats. After two more years in reserve, **Satellit** was again in active service in 1900 and 1902, as her machinery was overhauled. Between 20 January and 27 June 1904, she was stationed in the Levante (Eastern Mediterranean), to be later attached to the Torpedo Flotilla. On 3 January 1905, she collided with the torpedo boat **XXXVII**, and was after provisional repairs sent to the Levante again. Later during the year, she was disarmed and rebuilt. The damaged bow torpedo tube was replaced by two trainable deck tubes, and early in 1909, she was in active service again, as a station ship in Lošinj, and later as a part of the Squadron. In 1910, **Satellit** was in Tivat, and in late 1912 she served as a training ship of the Naval Academy in Rijeka. After being disarmed again, she received new water-tube boilers and three funnels and served in 1913/14 for cartographic survey of the Adriatic.

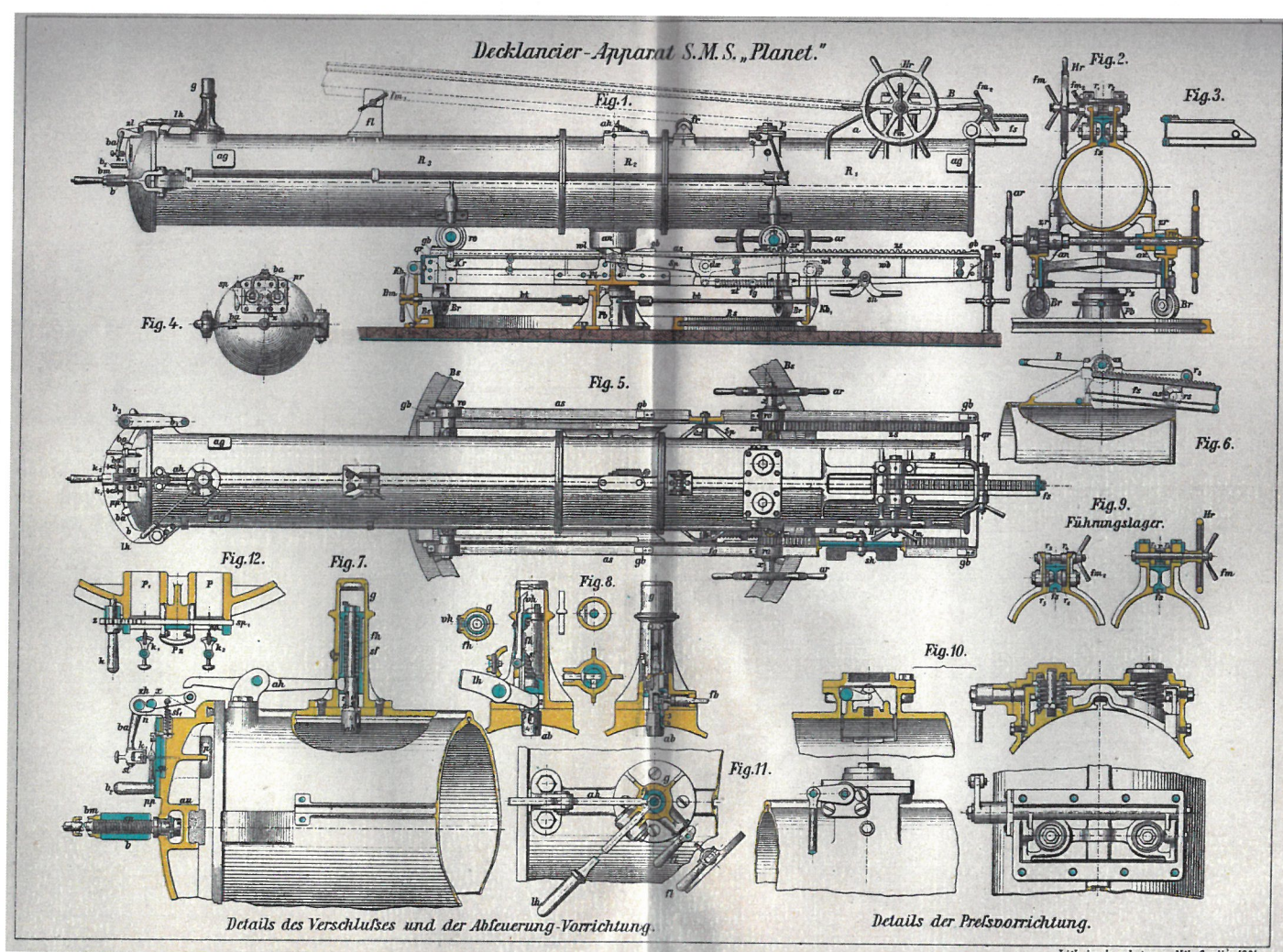


Satellit was the only A-H destroyer with three funnels. (Baumgartner)

Early during the World War One, **Satellit** received her minelaying rails again, to lay first mine barrages in front of Pula on 3 and 4 August 1914. Her CO was KK Ferdinand von Steinhart, and she was part of the 7th Destroyer Group of the 7th Torpedo Division, together with **Planet** and **Trabant**. On 26 September, **Satellit** towed the submarine **Ub. 4** from Pula to Boka kotorska, returning to Pula two days later. On 21 October, she towed the submarine **Ub. 5** to Boka and returned on 28 October. The next towing mission followed on 6 December, and the submarine was **Ub. 12** under **LSLt** Egon Lerch that damaged French flagship **Jean Bart** with one torpedo on 20 December, making an end to French sorties into the Adriatic. On her return leg from Boka, **Satellit** was towing the submarine **Ub. 3** back to Pula. On 20 December 1914, the old destroyer took part in the sinking of French submarine **Curie** that tried to enter the harbor of Pula but was entangled in the harbor barricade. Later the boat was raised, repaired, and commissioned for the A-H Navy as

Ub. 14. On 27/28 December 1914, *Satellit* was towing *Ub. 6* from Šibenik to Pula. Before and after the large-scale attack of the A-H battle-fleet on Italian Adriatic harbors on 24 May 1915 (after Italy declared war on Austria-Hungary one day earlier), *Satellit* was covering the fleet during its departure and return. On 31 July 1916, she seized a rowing boat with the deserter Nazario Sauro, who tried to escape after Italian submarine *Giacinto Pullino* stranded on the small island of Galiola. Sauro defected from Istria to Italy and served as a pilot on several Italian warships and submarines during their attacks on the A-H coast and shipping. Thus he was condemned to death as a traitor and executed. Until the end of the war, *Satellit* served with the local defense of Pula, was engaged in mine war, and escorted over 100 convoys. Her CO in 1917 was KK Nikolaus Sztankovich von Sztapar¹⁰, being succeeded by KK Richard Salcher¹¹ and in 1918 by KK Franz von Leonhardi. At the end of the war, *Satellit* was based in Boka kotorska, to be officially ceded to France, towed in 1920 over Bizerte to Toulon, and scrapped there.

First two vessels were in bad condition early in the war, and in 1915 it was contemplated to strike them from the fleet list, but they remained in service with the harbor defense. *Satellit* was in a somewhat better condition, being rebuilt in 1912/13, and was very successful with the harbor and local defense.

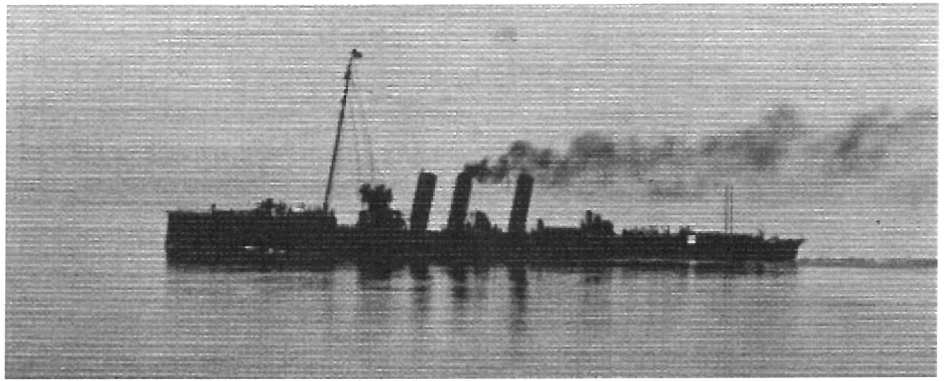


Bow torpedo tube on *Planet*. (Atlas T. U.)

¹⁰ Nikola Stankovic (1875-1942/Zagreb, Croatia), was one of the post-war C-in-Cs of the Royal Yugoslav Navy.

¹¹ Rikard Salcher (1875-1955), was another Admiral of the Royal Yugoslav Navy.

Satellit underway. (Greger)



Enthusiastic sailors in Pula after the Italian declaration of war on 23 May 1915; the fleet could finally sail-out against the „Italian Arch-Enemy“. In the background the destroyer *Satellit*. (Selinger)

TORPEDO VESSEL (DESTROYER) *MAGNET*

As *Planet* and *Trabant* were still in building in 1888, it was contemplated to build a larger “torpedo boat hunter”, with a displacement of 1,000 tonnes, as an offer was submitted by the F. Schichau shipyard for such a ship, with a displacement of 930 tonnes and a speed of 20 knots. Main artillery of two 12 cm (4.7in) guns was to be mounted in side galleries. The Schichau shipyard worked on this design together with Eng. Lollok (and the vessel was to be similar to *Meteor*), and it is no wonder, that the project was rejected by Soyka’s MTK that immediately made an own design for a 1,044-tonnes vessel.

Project	Displacement	Armament	Propulsion	Speed	Coal	Dimensions	Crew
Schichau (Lollok)	930 tonnes	Two 12 cm (4.7in), seven 47 mm, two 45 cm t. t.	Two shafts, 5,900 hp	20 knots	160 tonnes	70 x 9.3 x 3.35 m	120
MTK (Soyka)	1,044 tonnes	Two 12 cm, eight 47 mm, two 45 cm	Three shafts, 5,000 hp	21.16 knots	240 tonnes	79.73 x 8.4 x 3.36 m	140

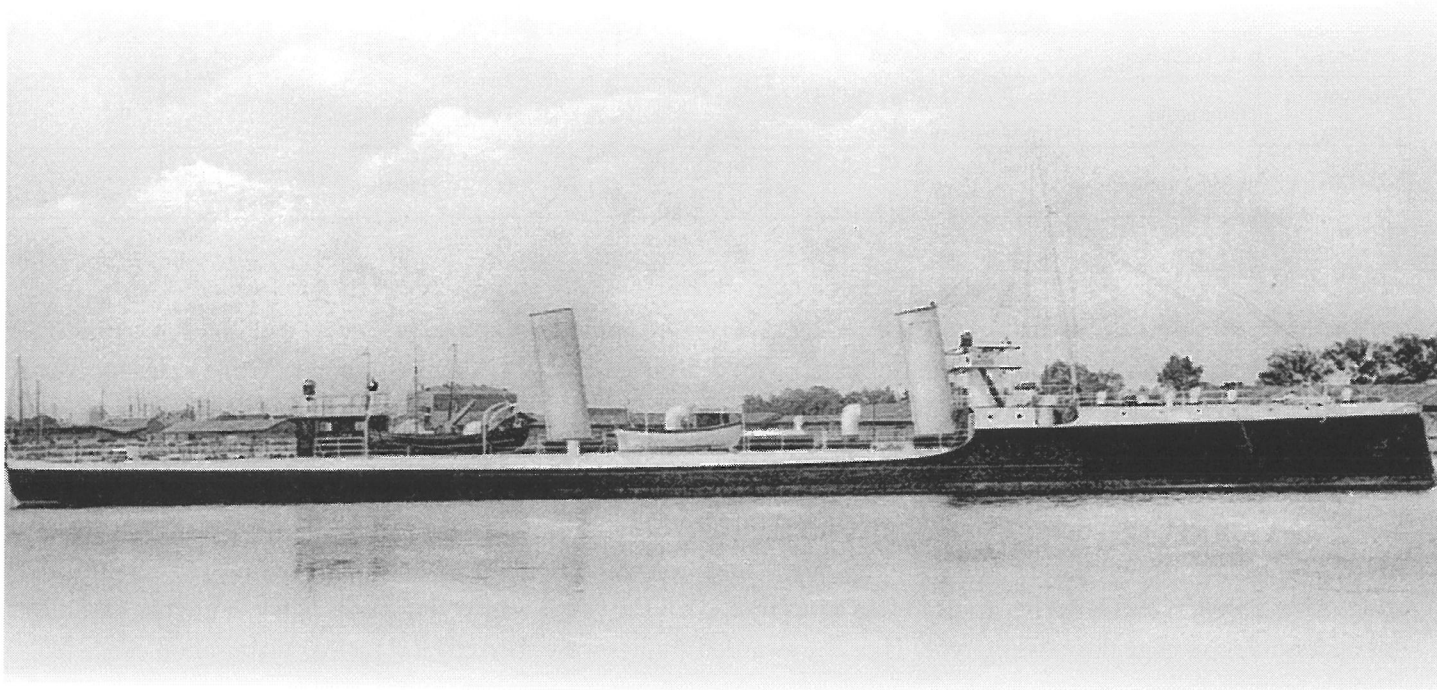
During the building of *Satellit* in summer 1892, the Navy Section in Vienna announced an internal competition for the next torpedo boat destroyer (or torpedo vessel) with a displacement reaching 740 tonnes, with a constant higher speed and with better seakeeping characteristics than the *Planet/Trabant* type. By September of the same year, six ship-building engineers from Vienna and Pula submitted their studies for ships with a length between 70 and 75 meters, being propelled by the 5,200 - 5,550 hp strong machinery. All were to reach a speed of 22 knots, and to be armed with one to four 7 cm and eight to ten 47 mm guns. On 7 September, the commission led by *LSKpt* Josef Schellander reported to have been inspected these studies, and four were awarded with prize money and proposed for further consideration. After *Satellit* completed her trials, it was announced that the vessel was having perfect characteristics and it was not necessary to change the existing type. Thus the awarded studies were shelved, and further elaboration cancelled.

In the meantime, the Naval Technical Committee (MTK) followed closely the international development of torpedo boat catchers (destroyers), especially of the British destroyer *Daring*, built between 1892 and 1894. Such a vessel would have been perfect for the A-H Navy, and even more the enlarged British destroyer HMS *Havoc* with a displacement of 480 tons. The Navy Section believed on the contrary that the next such ship should be ordered from Schichau, and the German shipyard was free to choose the displacement and dimensions of the vessel, but the ship was to maintain a speed of 24 knots for three hours. In September 1895, the building of this vessel began in Elbing, and in March 1896 the name *Magnet* was chosen. The destroyer was launched on 21 March, and after her boilers were installed, she was towed to Pillau. During her first trials on 26 June of the same year, *Magnet* reached a speed of 25.97 knots, with an average speed of 25.72 knots for five hours. Thus the contracted conditions were more than fulfilled, and the vessel was delivered to the A-H Navy on 5 July 1896. Because of excellent characteristics, the Navy Section was not asking for the penalty of 5,850 guilders for the late delivery of the vessel. *Magnet* left Pillau on 14 July and arrived at Pula on 2 August 1896.

	Shipyard	Keel laying	Launching	Delivery
<i>Magnet</i>	F. Schichau, Elbing	September 1895	21/03/1896	05/07/1896

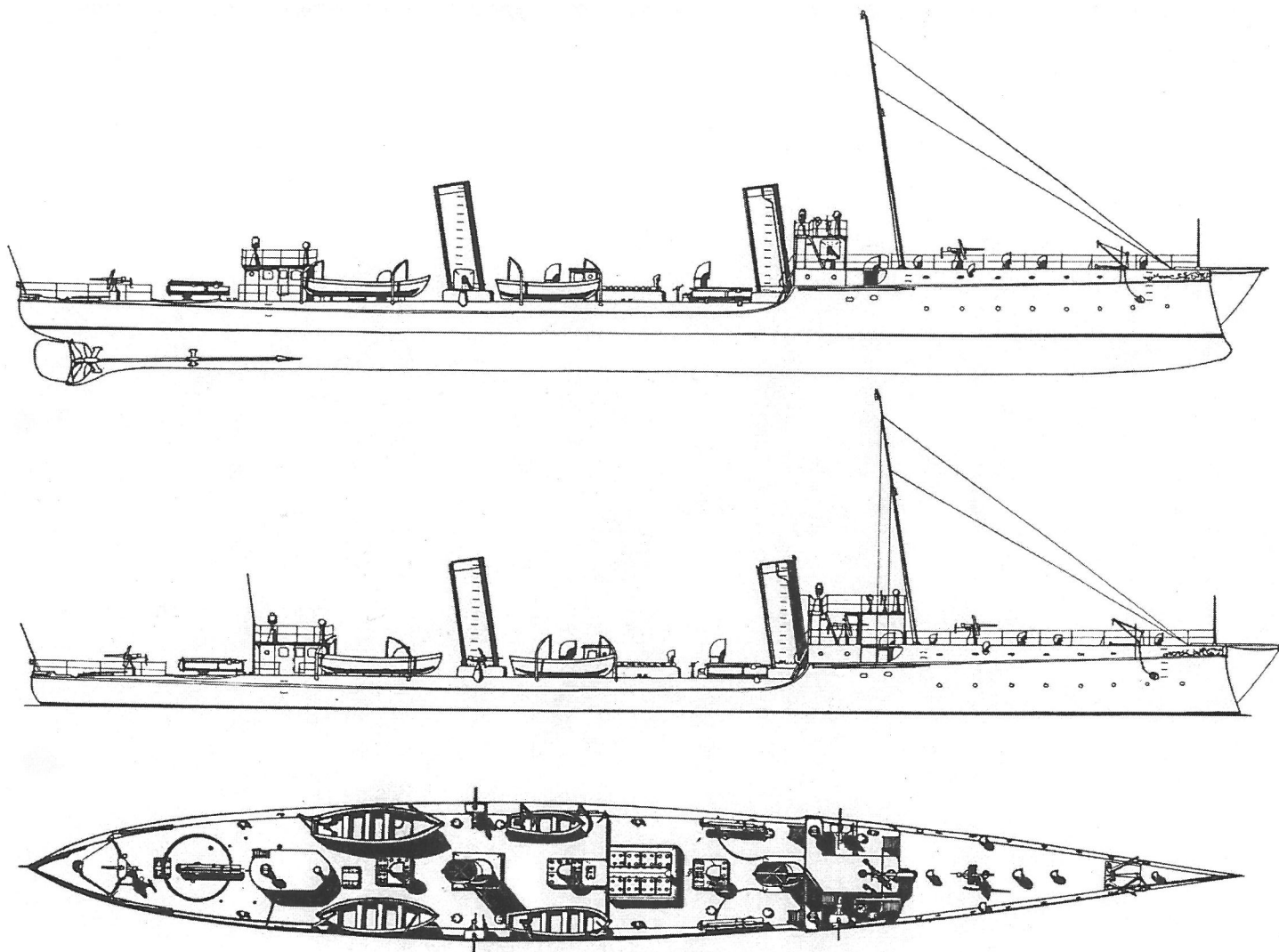
APPEARANCE AND PROPULSION

Magnet had a quite different appearance than her predecessors of the *Meteor* and *Planet* classes. Her raised forecas-tle was longer what improved seakeeping qualities, and was extended to the commando bridge, placed further aft than on older torpedo vessels. Her crew accommodations were roomier, and the bow 47 mm gun mounted one level higher. The ship had from the outset water-tube boilers and two funnels, the forward erected directly abaft the bridge, and the aft on the crossing of the middle and the aft third of the hull. Thus the whole ship appeared longer, and her raked funnels amplified the impression of high speed. *Magnet* was the most elegant of all seven A-H destroyer forerunners.



Magnet in 1896 after being completed. (Eichardt)

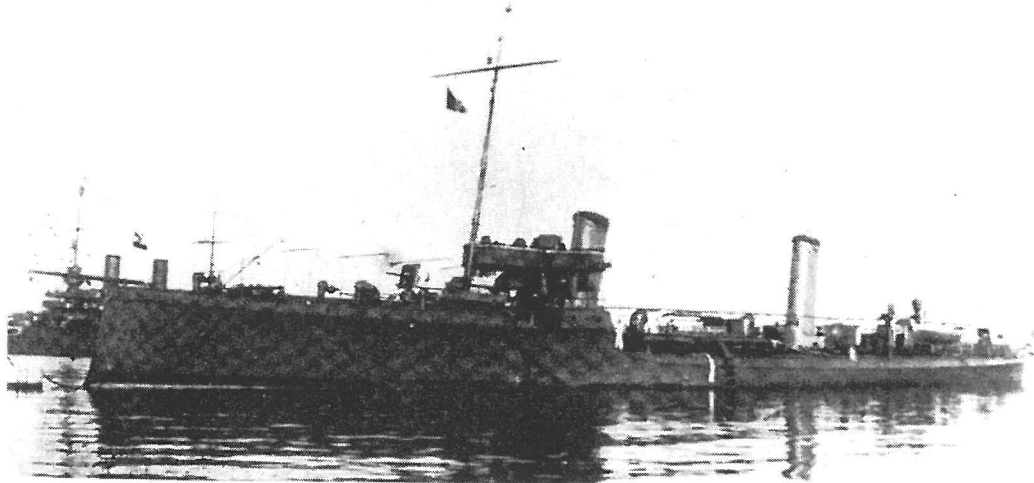
The stem was concave with a slightly pronounced underwater ram, but without a bow torpedo tube as on the predecessors. Two torpedo tubes were mounted on deck athwartship of the forward funnel, with the third aft, between the aft deckhouse and the aftermost gun. The keel was straight, the ship had two shafts and two propellers, and a shovel type rudder, as other Elbing-built ships. During repairs in 1916, new stern replaced the destroyed one, and *Magnet* got a balance rudder, as on the *Huszár* class destroyers. The length amounted to 71.00 m, the beam to 8.20 m, with the draught between 2.30 and 3.30 m. After repairs in 1916, overall length was reduced to 68.82 m, and draught rose to 2.40 m.



D. FRKA '95.

Torpedo vessel *Magnet* before and after her commando bridge was lengthened. (Frka)

One 47 mm QF gun was mounted on the forecastle, with other two forward 47 mm guns athwartship of the commando bridge. Two more 47 mm guns were mounted athwartship the aft funnel, and the sixth on the stern. The superstructures were low, and in addition to the commando bridge, there was only one small deckhouse with the aft searchlight and the secondary steering position. *Magnet* had initially only the foremast, erected several meters in front of the commando bridge. As she was rebuilt in 1908, the bridge was extended forward, to the mast, and the steering wheel, the compass, and the speaking tubes with the machinery telegraph were moved to the new part of the bridge. A short mainmast for signaling purposes was erected at the rear edge of the aft deckhouse, and during the next reconstruction in 1914, two pole masts replaced the mainmast, and carried the wireless aerials, after *Magnet* get a wireless station inside of the new deckhouse abaft the second funnel. The last modifications followed in 1916, after *Magnet* was torpedoed, losing her entire stern. A new stern was built, similar to the stern on the *Huszár* class destroyers. At the same time, *Magnet* was rearmed with two 7 cm guns forward and aft, replacing both 47 mm end-guns.

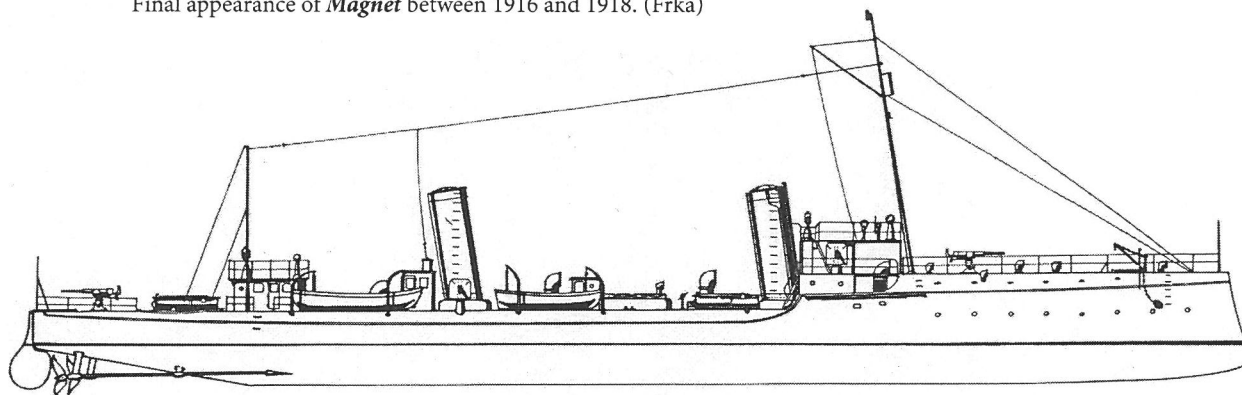


Magnet in Pula in 1913. (Schrott)

Four Thornycroft water-tube boilers, under pressure of up to 14 atm, supplied with steam two three-cylinder triple-expansion steam machines with a total output of 5,776 hp, enabling the 489 tonnes vessel to reach the maximum speed of 26 knots. The average output of 5,652 hp enabled the speed of 25.72 knots. During service her displacement rose, and the machinery output became lower. After repairs and modifications in 1916, the design displacement rose to 491 tonnes and the maximum displacement to 544 tonnes, and the average speed fell to 20.23 knots.

Up to 100 tonnes of coal could be bunkered, for a range of 2,000 miles at the speed of 12 knots.

Final appearance of *Magnet* between 1916 and 1918. (Frka)



D. FRKA '96.

ARMAMENT AND COMPLEMENT

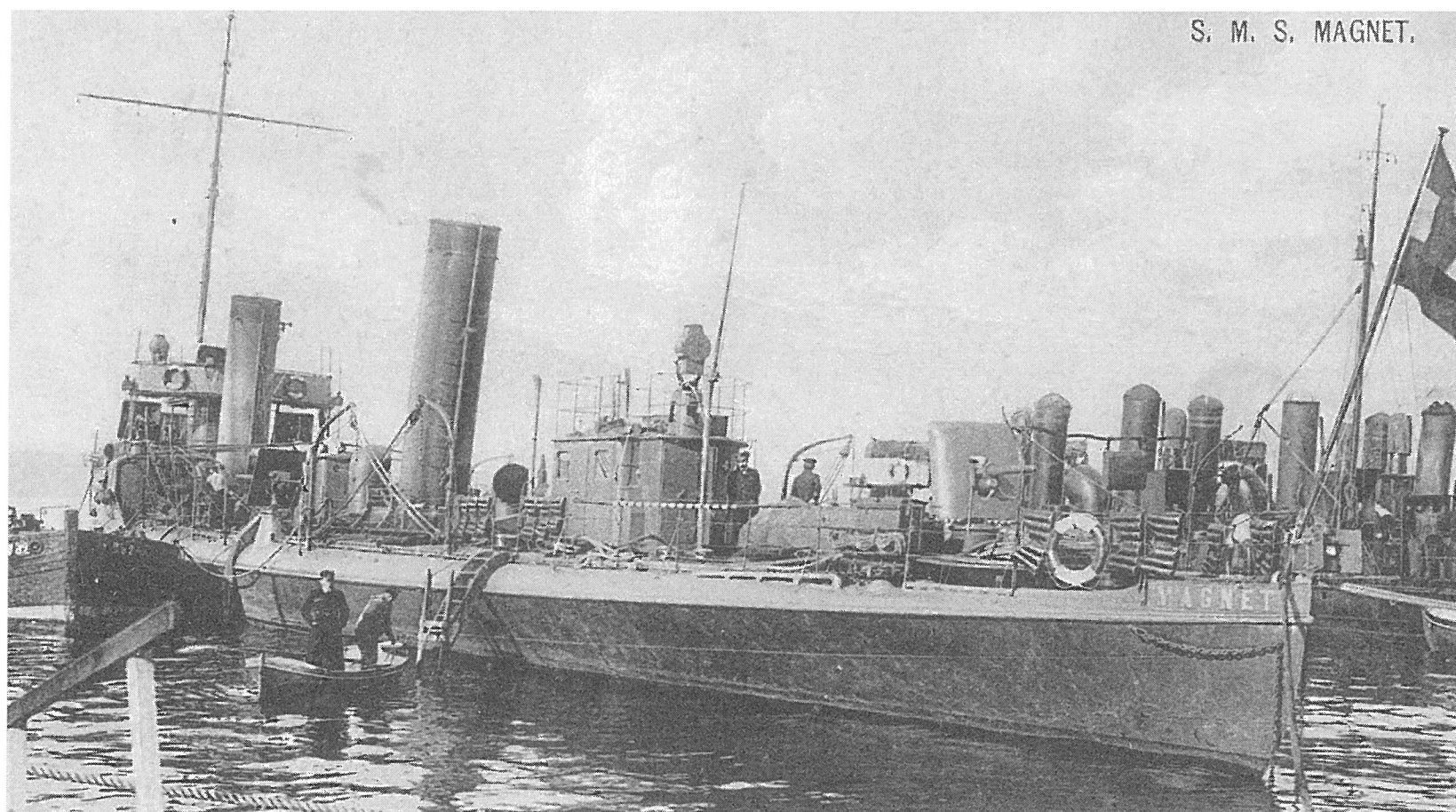
Magnet was initially armed with six 47 mm L/44 QF guns, with one forward, another aft, and remaining four in the broadside, and with three 45 cm (17.7in) single torpedo tubes. The trainable torpedo tubes were of the newer type with telescopic guide rails, and not of the backwards folding type, what theoretically was shortening the time necessary to launch torpedoes. Two tubes were mounted on the broadside on the main deck abaft the forecastle, athwartship the forward funnel, and the third aft, between the aft deckhouse and the stern gun mounting.

During repairs and modernization in 1916, forward and aft 47 mm guns were replaced by newer and more powerful 7 cm L/45 guns, and one 8 mm Schwarzlose M.07/12 anti-aircraft machine gun was added.

The vessel was initially equipped with two 40 cm (15.75in) searchlights, one being mounted on the bridge and another on the after deckhouse, and later there were three searchlight in the same caliber, one posted aft, and two on the bridge wings.

The complement consisted of a total of 85 men, five of theme officers.

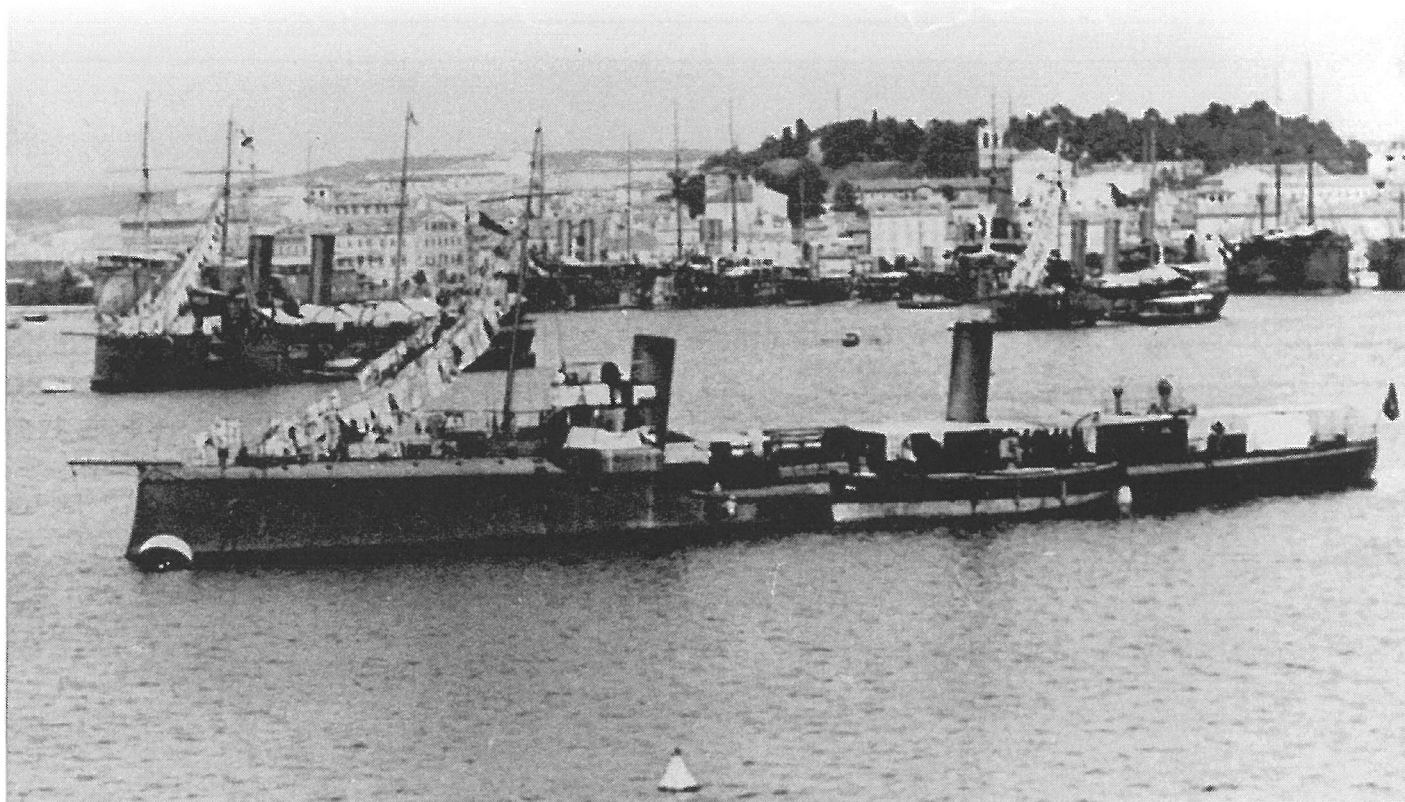
Displacement	Design displacement 485.04 tonnes; after 1916: design 491.1 tonnes, full load 544 tonnes.
Dimensions	Length 71.0 m, beam 8.2 m, draught 2.2-3.2 m; after 1916: length 68.82 m.
Propulsion	Four water-tube boilers, two 3-expansion steam machines, maximum output 5,776 hp, average output 5,652 hp; 100 tonnes of coal.
Speed and range	Maximum speed 26 knots, average 25.72 knots; after 1916: average 20.23 knots; range 2,000 miles/12 knots.
Armament	Six 47 mm L/44, three 45 cm torpedo tubes; from 1916 onwards: two 7 cm L/45, four 47 mm L/44, three 45 cm torpedo tubes.
Complement	85 (five officers).



Magnet in the Naval Arsenal in Pula. (Schrott)

Service and fate

MAGNET left Elbing on 14 July and reached Pula on 2 August 1896. She was armed in the Naval Arsenal, and early in 1897, there followed new trials and training exercises. After some necessary repairs and modifications, **Magnet** went into active service and took part in the blockade of Crete during the Greek uprising against the Ottoman rule. She operated with an international squadron, maintaining the “status quo” between 26 November 1897 and 12 April 1898, to return to the Adriatic afterwards. **Magnet** was serving with the Summer Squadron as the flag vessel of the Torpedo Flotilla and was later intermittently in service and in reserve. In 1901, she cruised in the Eastern Mediterranean again, visiting several harbors in Greece, Turkey, Lebanon, Syria, and on Crete. She took part at large exercises of the A-H Navy in 1902 (in presence of the Emperor, Franz Joseph I), with the group that was supporting the landing on the Istrian coast. In 1903, **Magnet** was serving again with the Training Squadron, but because of frequent malfunctions, it became necessary to replace her boilers and shafts, what was carried out in 1906/07.

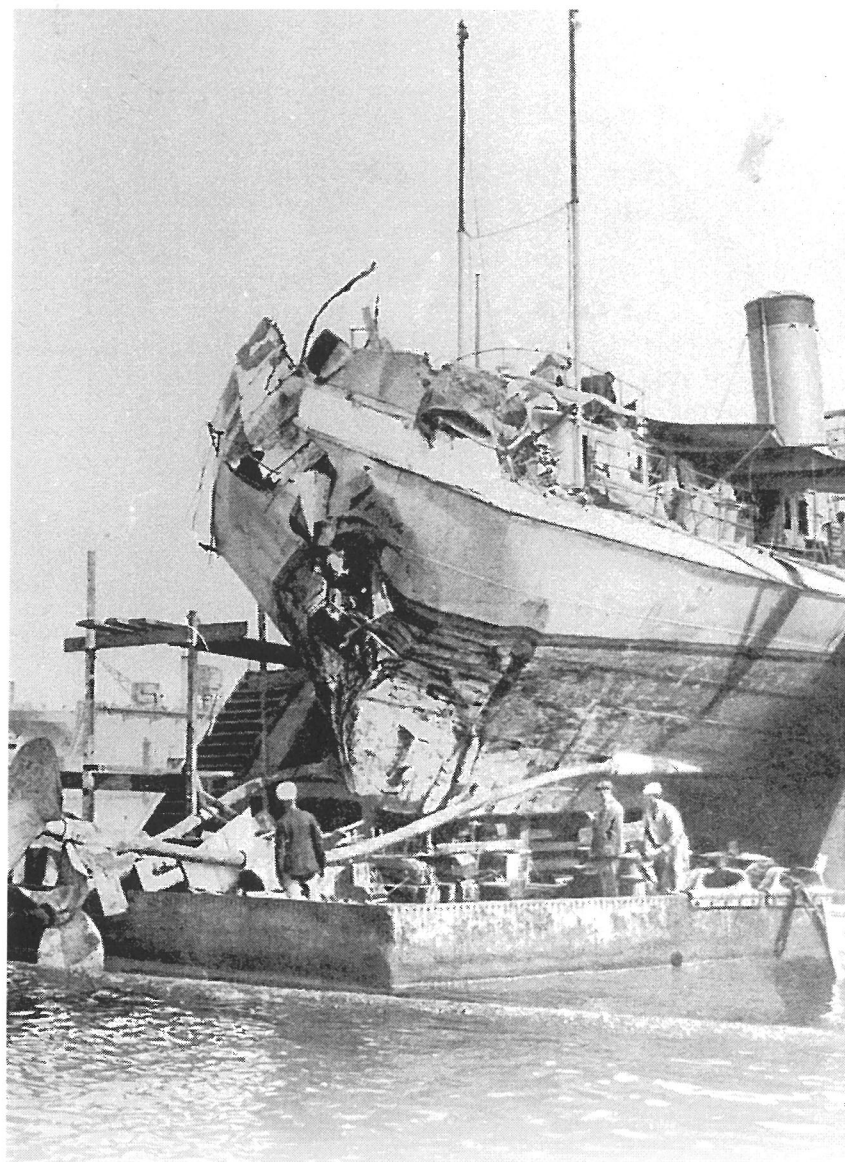


Magnet in Pula in 1906. (Schrott)

During the crisis provoked by the Austro-Hungarian annexation of Bosnia-Herzegovina in 1908, **Magnet** was serving with the Squadron, together with the battleships of the *Erzherzog* and *Habsburg* classes, the cruisers **Kaiser Franz Joseph I** and **Zenta**, the destroyers **Turul**, **Pandur**, and **Komet**, and with high-seas torpedo boats. Beginning with September 1908, she was in reserve again, was later activated for the Training Squadron, in 1909 for the active Squadron, and in 1909, she was attached to the *Levante Division* (together with the armored cruiser **Kaiser Karl VI** and the cruiser **Zenta**), being sent to Piraeus, where because of severe disturbances, an international fleet was “shoving the flag” between April and June 1909, to protect foreign nationals. This fleet included two British battleships with three cruisers and three destroyers, one French battleship with three cruisers, three Italian and two Russian cruisers. After the unrests

were over, *Magnet* was in Cephalonia in early June 1909, to return to Tivat and finally to Pula, to be disarmed there. On 1 December 1909, she was attached to the Naval Station Mali Lošinj, and remained there with interruptions until the end of her service. In 1912, her boilers were replaced again, and *Magnet* was in a higher state of readiness with other warships because of Balkan wars. In Summer 1913, she was stationed in Tivat and Kotor, entered later the Bojana estuary, made patrols off the Albanian coast, and visited Valona and Brindisi. She served as a station ship in Valona, being replaced there by the destroyer *Velebit*, and returned to Lošinj on 15 December 1913.

Early during World War One, *Magnet* was stationed as the guard ship on Lošinj, and her CO was KK Rudolf Chimani. The destroyer was shortly overhauled in Kraljevica, and cruised off the Dalmatian coast on 19 September 1914, as a landing of Italian volunteers from the *Beppino Garibaldi* Corps was announced; it was in fact a war ruse, launched by the French, as their fleet was at this time operating in the southern Adriatic. During a docking time in Pula later in the year, *Magnet* got the already mentioned wireless apparatus, to return to Lošinj afterwards. In February and April 1915, she was searching for enemy submarines in the Bay of Kvarner and took part at the chase after Italian airship *Città di Ferrara* on 8 June 1915, after this vessel attacked the Danubius shipyard in Rijeka. The airship was attacked by the A-H seaplane *L 48* from Pula by machine-gun and carbine fire and finally set on fire by the signal pistol. *Magnet* rescued the surviving crew members of the downed airship.



After Italian submarine *Giacinto Pullino* stranded on the Galiola islet, *Magnet* was protecting together with torpedo boats 4 and 6 the vessels that tried to salvage the enemy vessel on 31 July 1916. After the submarine sank in tow, *Magnet* was underway to Lošinj, and was attacked by Italian submarine *Salpa* with four torpedoes. One torpedo hit, and *Magnet* lost her stern and the rudder, but remained afloat and was towed to Pula, where a new stern was installed.

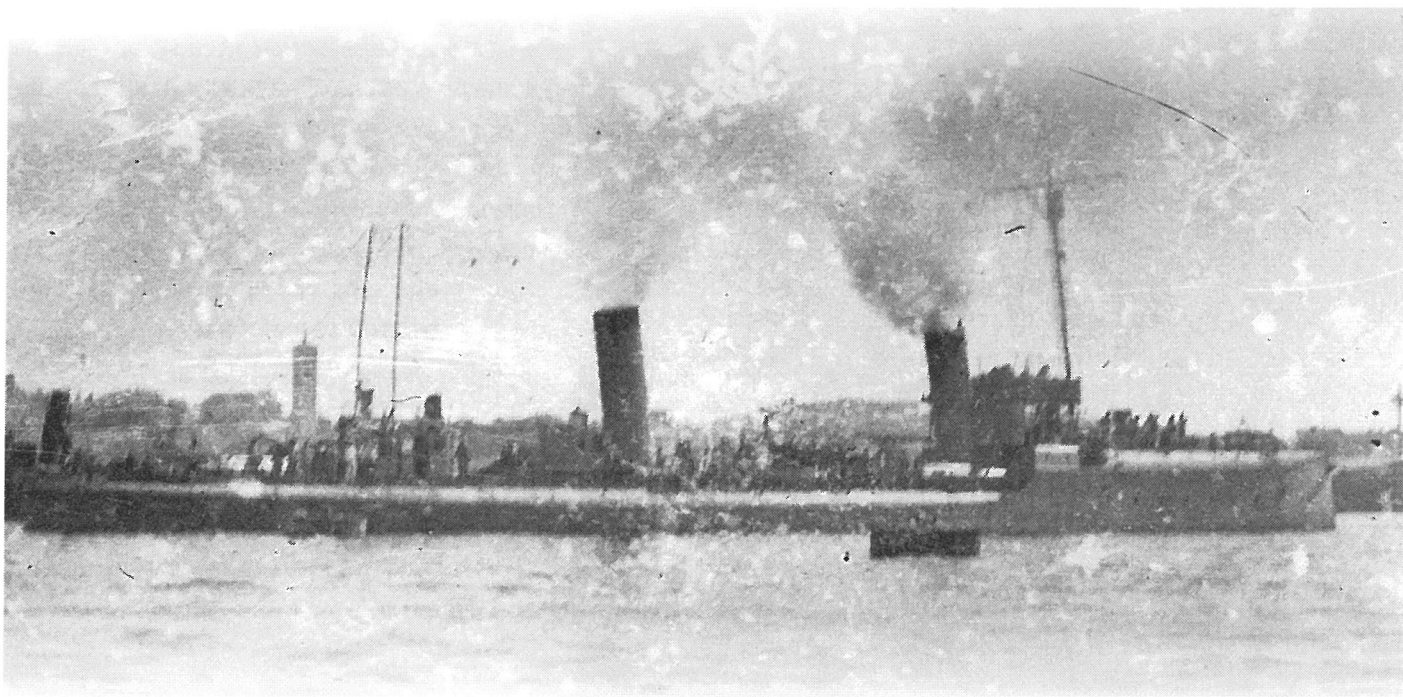
Magnet in dock after being torpedoed on 2 August 1916. Twin masts aft for the wireless aerials could be clearly seen. (Baumgartner)

A new trial run followed already on 21 December 1916. *Magnet* operated from Lošinj again, escorted several convoys and searched for submarines. In 1918, her CO was KK Ernst Rusch. After the war, *Magnet* was ceded to Italy in 1920 and dismantled.

Magnet was the most successful of all seven A-H destroyer-forerunners, was displacing less than the *Planet* class vessels, and was faster and armed with torpedoes of larger caliber. Her robust construction saved the ship after being torpedoed in 1916. According to the plans of Admiral Spaun, the C-in-C of the A-H Navy from 1897 to 1904, eight ships of the improved *Magnet* type were to be built by 1908, but this program was shelved because of savings, as priorities were given to the battleships of the *Habsburg* class and the armored cruiser *Sankt Georg*. Soon there came to a quarrel between the A-H Army and Navy about the distribution of financial means, and Spaun submitted his resignation, what partially slowed the development of the Navy. At the same time, the results of trials of new British destroyers were awaited. It was the reason that new A-H destroyers of the *Huszár* class were ordered only in 1904.

The F. Schichau shipyard used the experiences with *Magnet* to build four similar destroyers for China, six destroyers of the *Lampo* class for Italy, and to design the slightly larger destroyers of the *Emir Buchariskij* class for Russia (four vessels), all of these similar to *Magnet*.

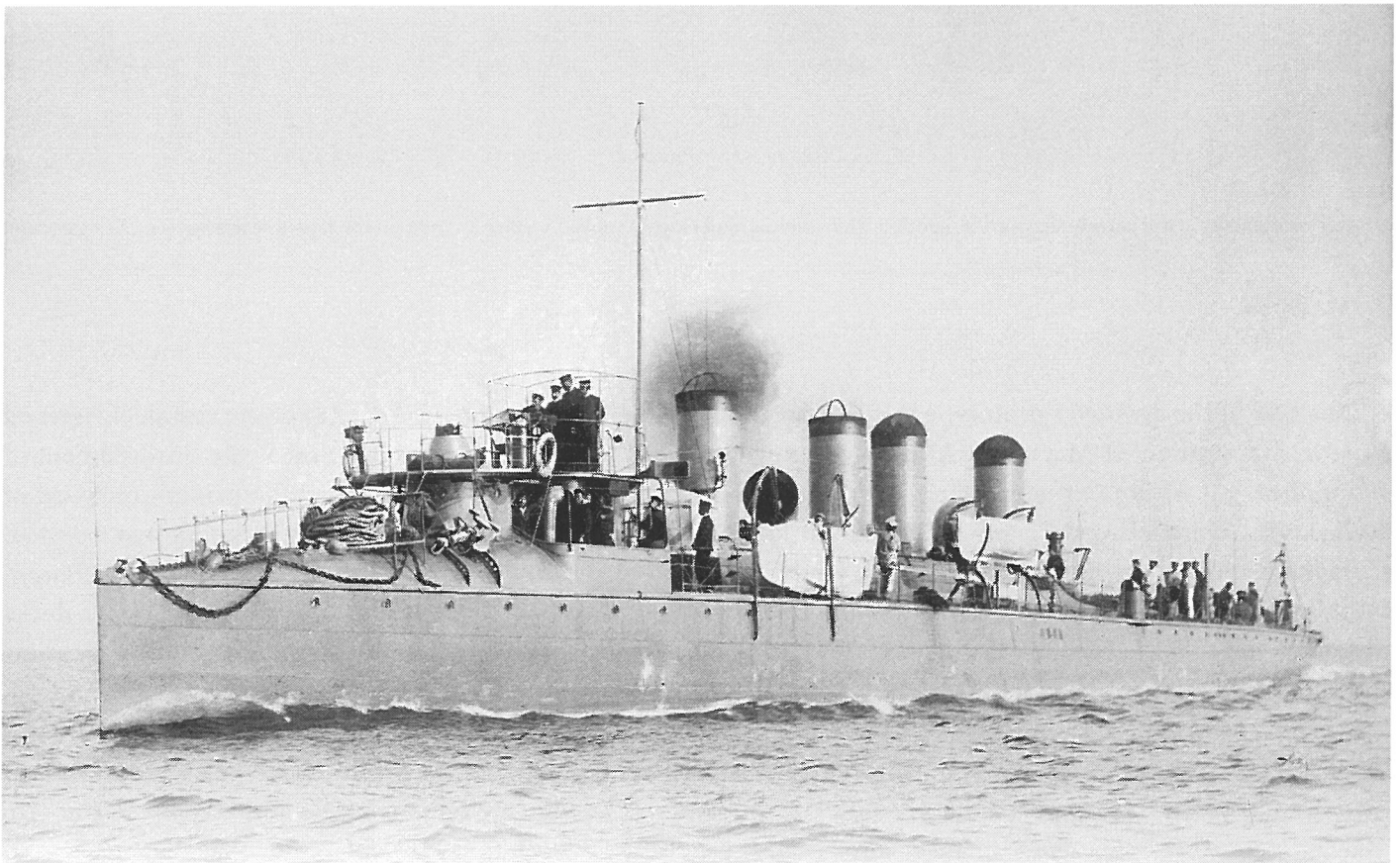
The destroyer development was progressing with great leaps, but old *Magnet* was still effective and remained in service until the end of the war.



Magnet in Pula, after being repaired in 1916. (Greger)

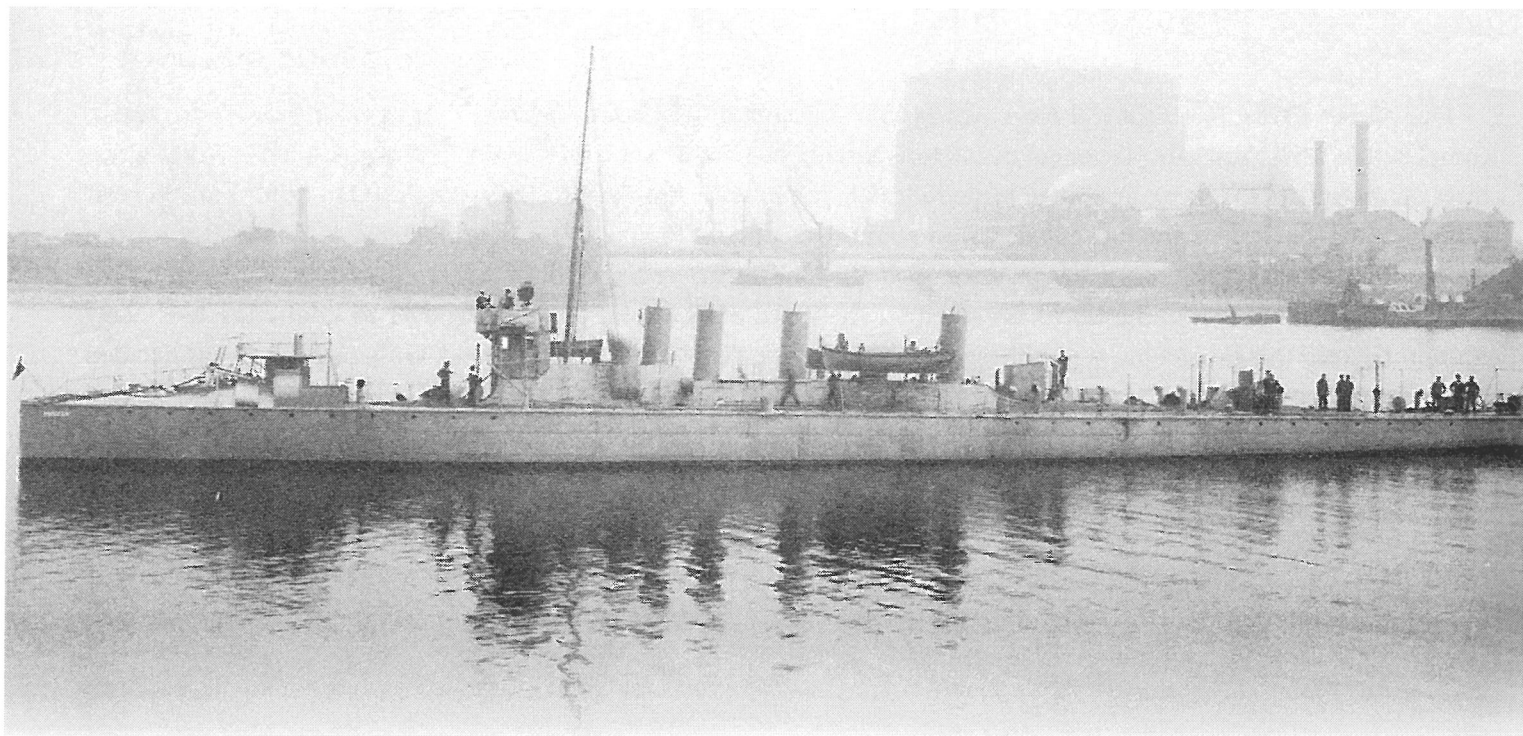
DESTROYERS OF THE *HUSZÁR* CLASS

During the 1890s, British *Royal Navy* was rapidly developing destroyers, and the first of these was HMS *Havoc*, completed in 1894, with a displacement of 240 tons and a speed of 26 knots, armed with one 12-pounder (75 mm gun), three six-pounders (57 mm), and three torpedo tubes. The best known British shipyards, specialized for building fast torpedo units (destroyers and torpedo boats) were Thornycroft and Yarrow. Already in 1895, Fa. A. Yarrow & Co. from Poplar offered to the A-H Navy a design developed after the destroyer *Sokol*, built for the Russian Navy. It was at this time the fastest destroyer of the world, designed for the speed of 29 knots, but reaching over 30 knots. The A-H Navy Section rejected this project but was still eagerly following the development on this field. Only in 1904, it was decided to replace the small torpedo boats with larger division boats, displacing about 150 tonnes. On 6 April 1904, an offer was asked from the German Schichau shipyard for a larger division vessel with a displacement of 350 tonnes and a speed of 26/27 knots. At the same day, the A-H naval attaché in London was instructed to contact the Yarrow shipyard and to ask for an offer for a destroyer similar to the newest British vessels of this category.



Japanese destroyer *Kasumi* built by the Yarrow shipyard; her commando bridge is nearer to the bow than on the A-H *Huszár* class vessels. (Wikipedia)

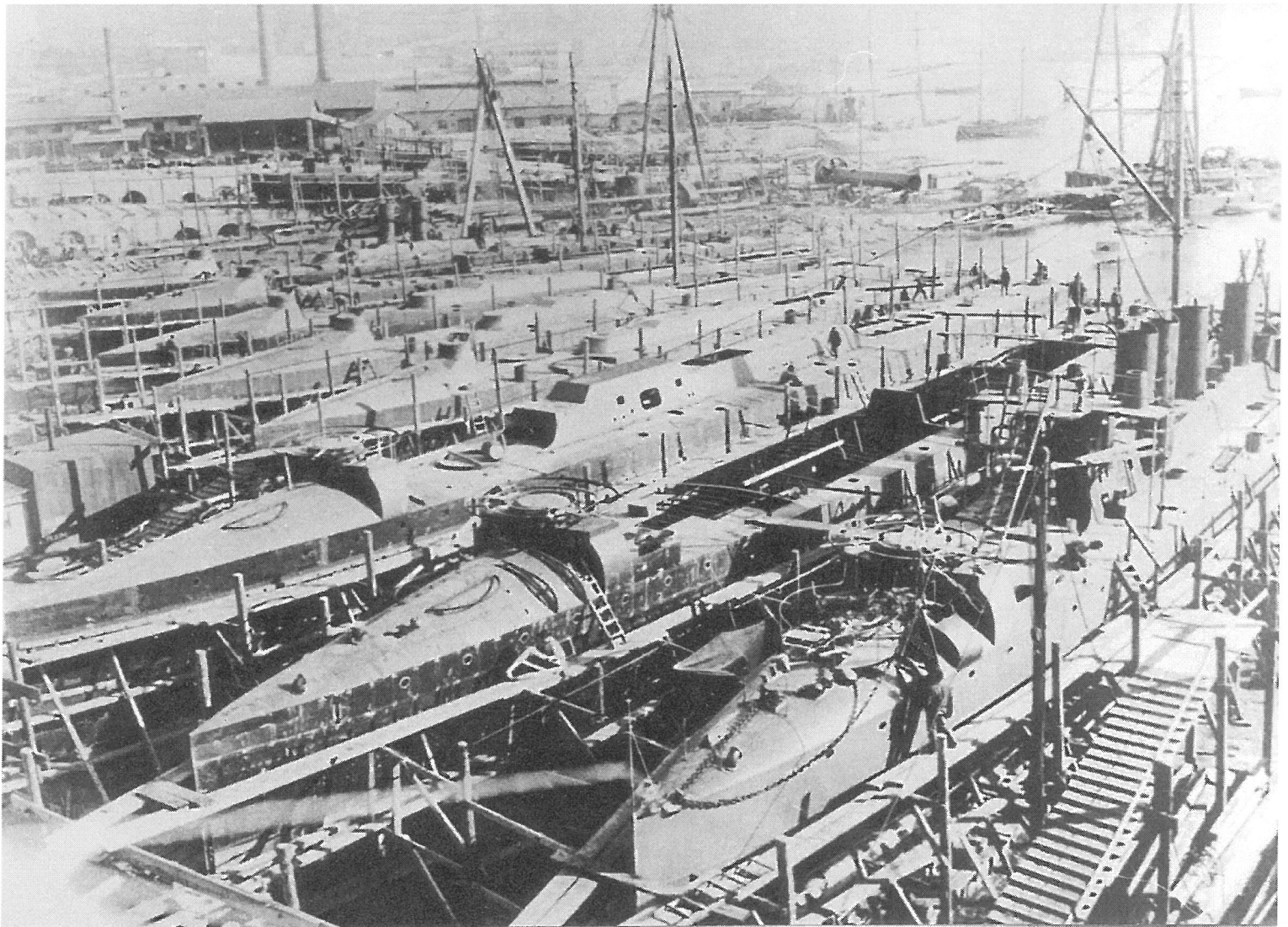
The shipyard answered to have recently built several 400-ton-destroyers for the Japanese Navy (*Ikazuchi*, *Niji*, *Inazuma*, *Akebono*, *Sazanami*, and later also *Akatsuki* and *Kasumi*), and that this design would perfectly fit the Austro-Hungarian needs. Yarrow representatives showed the drawings of these vessels to the Navy Section in Vienna, and already on 6 August, the contract was signed for building a 400-tonnes destroyer prototype. The shipyard was solely responsible for the dimensions, but the vessel was to maintain the speed of 27 knots for six hours. Two 4-cylinder triple-expansion 3,000 hp steam machines were to be of the same type as on the 200-tonnes-torpedo boat ordered at the same time from the shipyard for the A-H Navy (the prototype of the *Kaiman* class).



Huszár after completion in the Yarrow shipyard in London. Her command bridge is moved further aft than on the Japanese destroyers. (Kriegsarchiv)

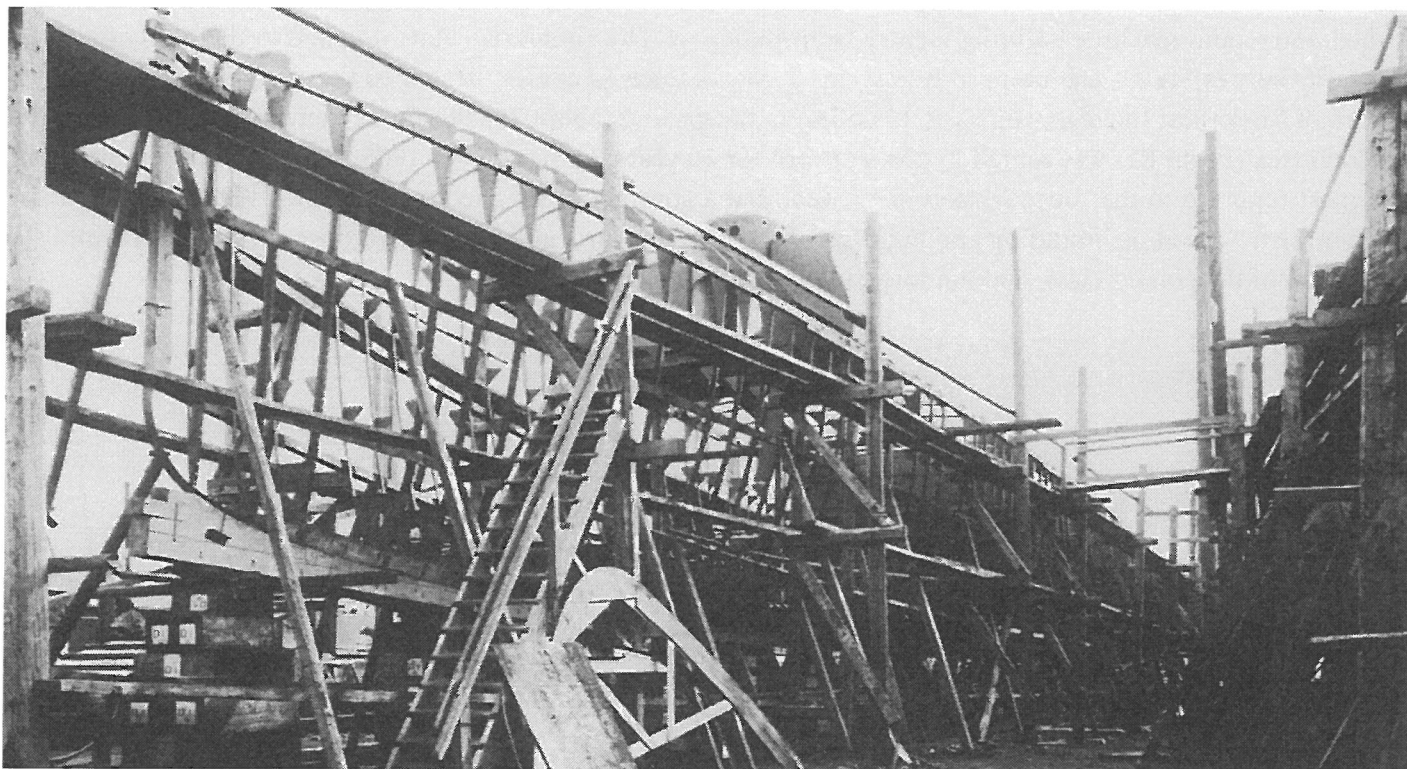
The keel of the destroyer prototype was laid on 14 November 1904, and the launching of the vessel, christened *Huszár*, followed on 31 May 1905. Already one day later, first trials were conducted, and at the displacement of 406 tonnes, but without armament, ammunition and other equipment, the ship reached the maximum speed of 30.27 knots. On trials conducted on 15 and 20 June, the average speed of 28.45 and 28.54 knots was reached. *Huszár* was taken over by the A-H Navy on 4 July and sailed on 11 July, together with the torpedo boat *Kaiman*, from London to Pula, arriving there on 28 July. Underway it was realized that the ventilation of the between decks was poor, and that the number of stokers should be increased by at least eight men, as the existing number was insufficient for this exhausting job. During the armament installation it became necessary to move the pivot of the forward torpedo tube 1.15 m forward, to enable the unobstructed loading of the tube. The galley was moved to the deck, and the ventilating cowls outfitted with electrical ventilators. On new trials lower speeds were reached than in England; it was supposed that the new coat of paint on the underwater part of the hull was not so smooth, that the waters off Pula, where speed was measured, were of less depth than in England, or that the stokers and other machinery personnel were less trained than the shipyard crew.

The series of eleven destroyers of the *Huszár* class were to be built in one Austrian (S. T. T. in Trieste) and one Hungarian shipyard, and Yarrow was to deliver the needed drawings and templates. The preliminary contract with the S. T. T. was signed on 29 November 1904, but on 18 January 1905, the number of destroyers to be built in Trieste was reduced from economic reasons to five, and of the torpedo boats to thirteen. At this time, there was no shipyard in the Hungarian part of the Monarchy, able to build such ships. In January 1905, at the initiative of the Hungarian trade minister, the small Lazarus shipyard in Rijeka/Fiume was merged with the Danubius-Schoenichen-Hartmann machine building factory from Budapest. The Hungarian state donated to the newly founded shipyard Ganz és Társa – Danubius in Rijeka (the 3. Maj of today) a coastal stretch on the shore in Brgudi (today a suburb of Rijeka) for the main shipyard. In addition, the ground (about 25,000 square meters) of the old shipyard in Kraljevica (Porto R ) was rented by the shipyard for 80 years. In September 1905, the Danubius factory from Budapest reported to the Navy Section in Vienna, that a contract was signed on 23 August with the Hungarian trade ministry about the founding and building of the new shipyard, and that this yard would be able to build six destroyers of the *Husz r* class, and ten torpedo boats of the *Kaiman* class.

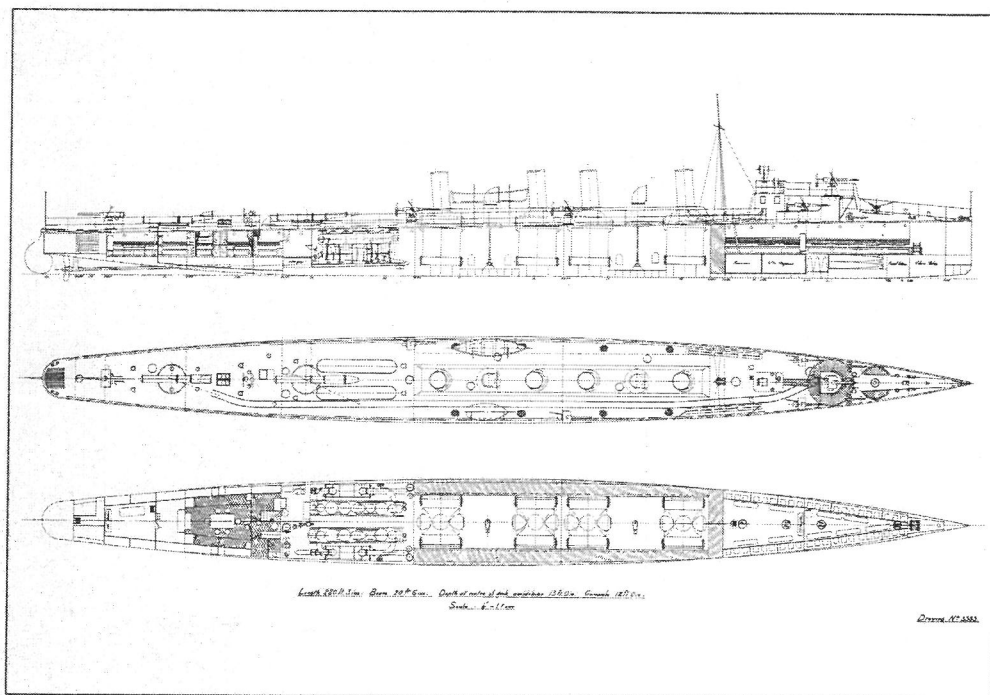


Building of the *Husz r* class destroyers and *Kaiman* class torpedo boats in Trieste. (Pawlik)

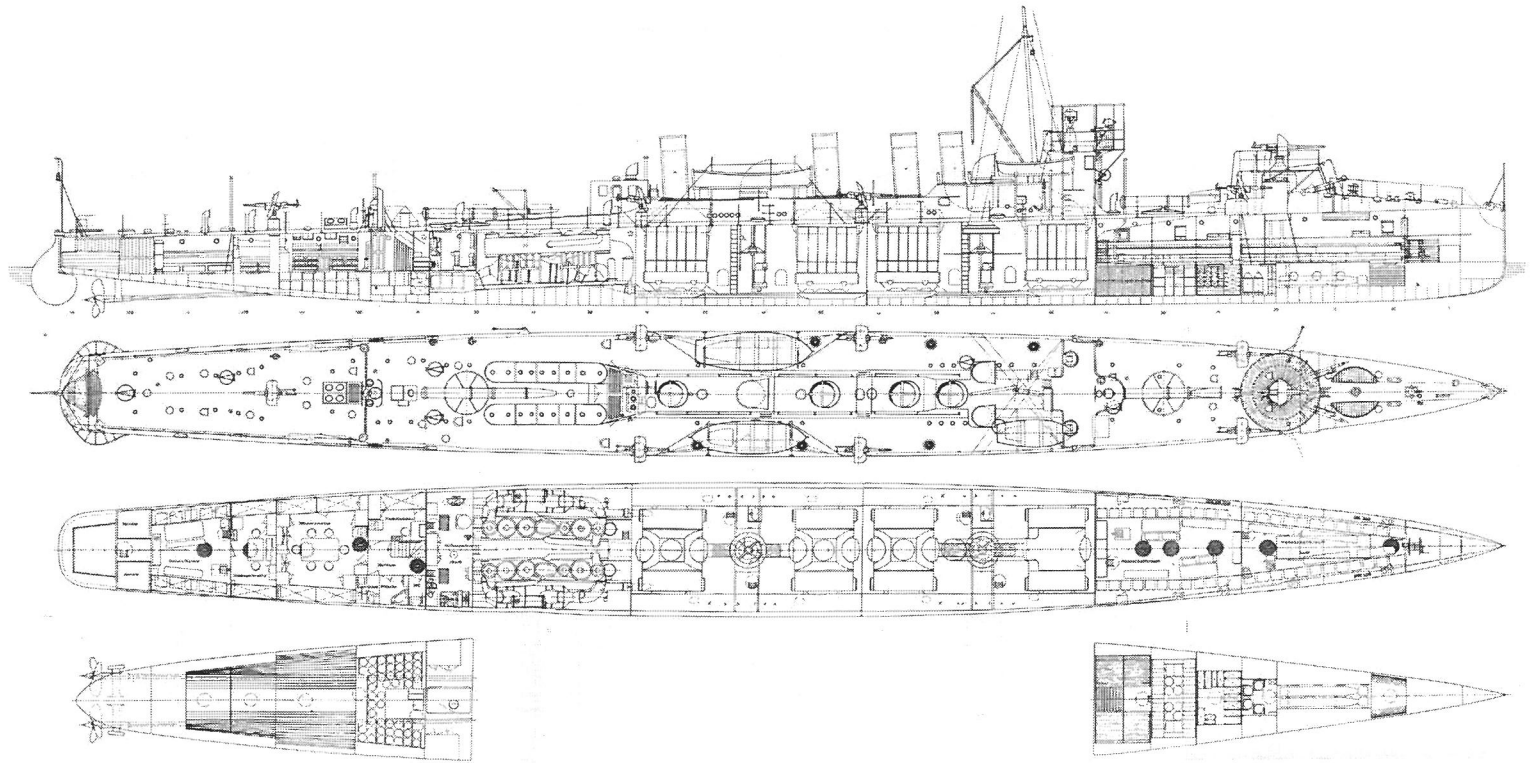
The building of the shipyard went slowly, partially because of workers' strikes, but also because the official contract for the shipbuilding was not yet signed. The contracts were finally sent to the shipyard on 19 January 1906, and on 2 March 1907, the Hungarian trade minister reported to the war minister that the yard has begun with the work and could build ships after receiving the ordered materials. The building of the first (Hungarian) vessel of the *Huszár* class began in Summer 1907, and the last was commissioned on 31 December 1909.



Frames of the destroyer *Turul*, the first vessel of the *Huszár* class being built by the Danubius shipyard in Rijeka. (3. Maj)

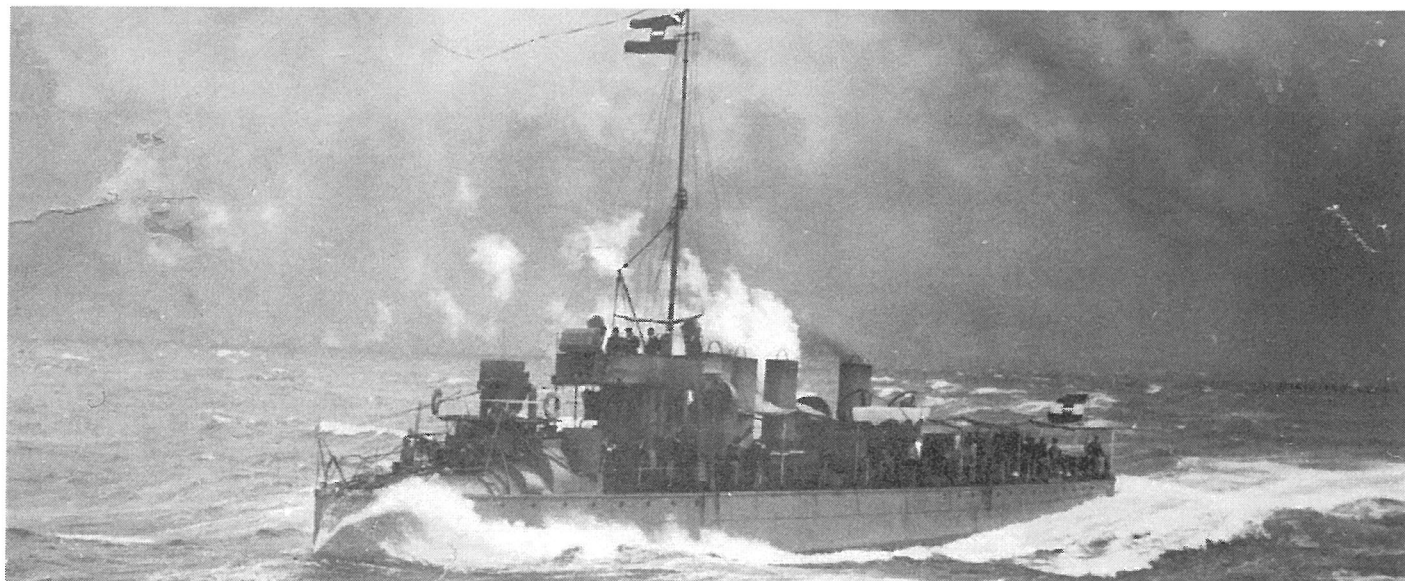


Drawings of the Japanese *Akebono* class destroyer, a template for the *Huszár* class. (Kriegsarchiv)



Longitudinal sections of the *Huszár* class destroyer in initial appearance. (Eichardt)

The story of the building the *Huszár* class was still not over with *Dinara*, completed in late 1909. One year earlier, on 3 December 1908, *Huszár* sailed from Boka kotorska to Budva, for an inspection sortie, with COs of other destroyers on board. The CO of *Huszár*, KK Renner, handed the command over to LSLt Becker, and was talking with other officers. Becker was convinced, to have already passed the Albanež shoal, and changed the course slightly, without making a report about it to the CO. Thus the destroyer hit the shallows at 0810 hours and grounded all along to the aft boiler room. The starboard side was opened to the sea at a length of 20 meters, and all forward rooms were flooded. At first it seemed that the ship could be salvaged; on 5 December, the tug *Gigant* arrived at the accident site, and was joined later by the armored cruiser *Sankt Georg* with the battleship *Erzherzog Friedrich*, three torpedo boats and several lighters to embark parts of equipment. About 130 tonnes of material were removed from the hull, with 330 empty barrels loaded into lower holds to increase the buoyancy, but it was to no avail. *Sankt Georg* tried to tow *Huszár* from the shoal on 10 December, but the tow line broke. Soon strong southern wind was blowing in a gale force, and all salvage attempts were cancelled. Only *Erzherzog Friedrich* remained anchored near the wreck, but was damaged by the storm, losing one anchor and suffering damages to her stern gallery. The hull of the stranded destroyer was bent on the rocks on 11 December, the stern part was flooded too, and *Huszár* slid from the shoal and sank on 12 December. The weather worsened even more, and all ships were to seek shelter in harbor; two lighters were torn from their anchors, and one of these sank. After the storm, the hull of the destroyer was found broken in three parts at the depth of 15 meters. The salvage was resumed on 19 December, and by 24 December three boilers and one propeller shaft were raised, together with the sunken lighter. The operation was resumed after Christmas, to raise the stern part of the hull, some other parts of equipment, and the fourth boiler. Renner and Becker were dismissed, accused for the neglect of duty, convicted and imprisoned for several months, to be shortly released.



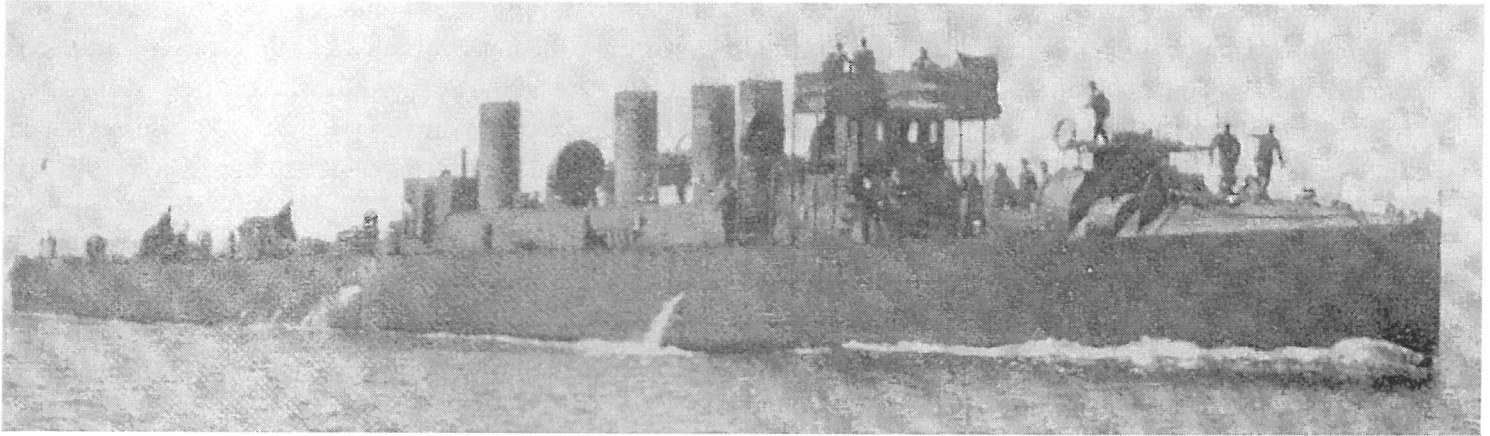
Huszár in heavy seas. (H. Stockinger, via Greger)

In accordance with the order No. 325 from 10 April 1909, the Naval Arsenal from Pula was to build a replacement vessel under the same name (using parts of salvaged armament and equipment), but the building was financed from means reserved for repairs and reconstruction, thus it was classified as a “large reconstruction”. The S. T. T. and Danubius shipyards were to deliver necessary machinery and segments of the hull, and new *Huszár* was launched on 20 December 1910, and commissioned after first trials on 8 February 1911.

FROM *LUNG TUAN* TO *WARASDINER*

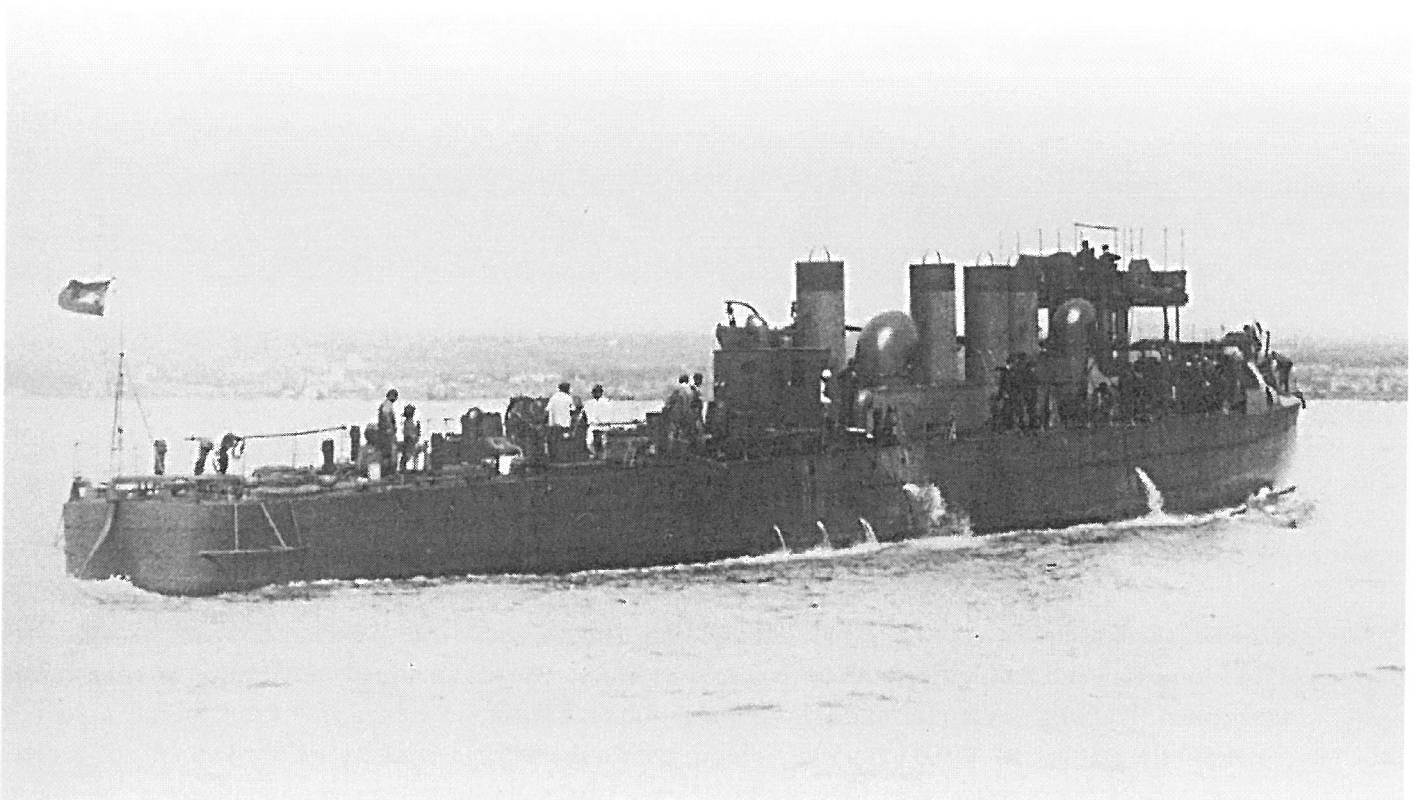
Still another vessel of the same type was to be commissioned for the A-H Navy, being initially ordered for China. The Chinese Navy suffered heavy losses during the 1894/95 war against Japan, and it became necessary to renew the fleet. The Program from 1895 was slowed in 1900/01 (because of the Boxer Rebellion and the international intervention against the Chinese Empire), to be renewed in 1908 as “The Great Fleet Plan”. A naval delegation was sent abroad, being led by Prince Tsai-Tsun and Admiral Sa Zhenbing¹², visiting principal maritime powers, like Great Britain, France, Italy, Austria-Hungary, Russia, Japan, and United States. The delegation was staying in Pula between 30 December 1909 and 2 January 1910. Underway contracts with several shipyards were signed, for building of three smaller cruisers (two in Great Britain, and one in the USA), two larger gunboats (in Japan), and three destroyer prototypes (each one in Italy, Germany, and Austria-Hungary). The Austrian boat was ordered from the San Marco shipyard of the S. T. T. in Trieste and was to be christened *Lung Tuan*. She was similar to the *Huszár* class, but was lighter built, with an improved hull shape and higher speed, and was to be armed with English Armstrong guns instead of the Skoda guns like the A-H destroyers of this class. The keel was laid on 1 April 1911, the launching followed on 3 April 1913, and during trials on 31 May and 1 June the speed of 30.65 knots was reached.

¹² Sah Chen-ping according to the Wade-Giles transcription.



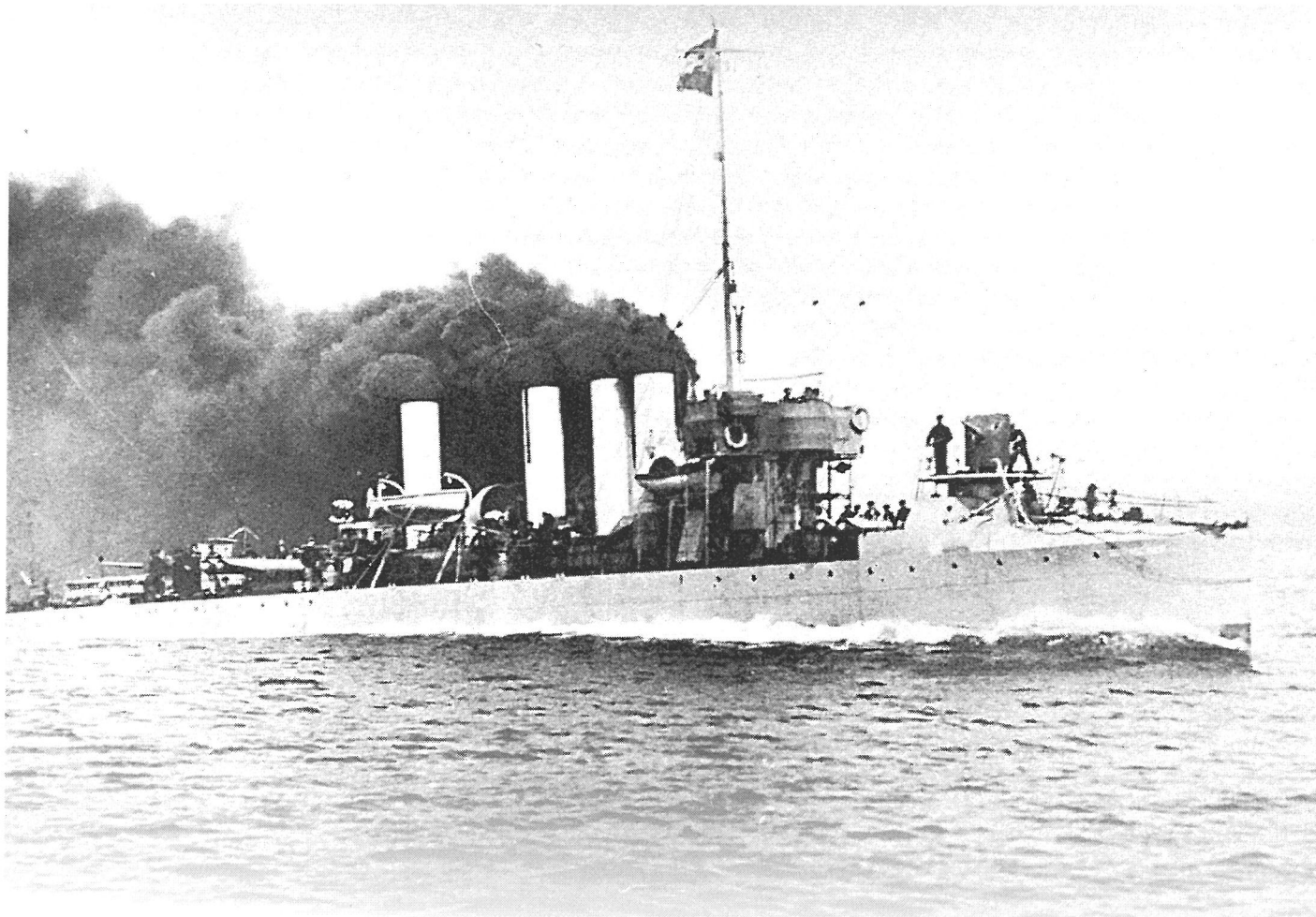
Trials of *Lung Tuan*, the future *Warasdiner*. (Traiber)

In the meantime, revolution erupted in China on 10 October, the Empire fell and was replaced by a National Republic. The plans of rebuilding the fleet were reduced, and contracts cancelled, thus S. T. T. was saddled with the completed *Lung Tuan*. It seems that the ship was to serve as a prototype for further Chinese destroyers of this type, according to a new contract signed with the S. T. T. on 13 April 1913, and at the same time from the C. N. T. shipyard in Monfalcone four cruisers (one larger and three smaller) together with six bigger were ordered. Seemingly in China it was forgotten that *Lung Tuan* was not taken over by their Navy, in spite of the fact that the S. T. T. shipyard was visited by the Chinese ambassador between 6 and 12 June 1912.



Lung Tuan on trials in front of Trieste. (Traiber)

In November 1912, the destroyer was offered to the A-H Navy for a sum of 1.2 million crowns, but the Navy was not interested any more in this type of destroyers, as in the meantime the building of larger, steam-turbine propelled destroyers has begun, the future *Tátra* class (see there). Only in July 1914, as the First World War broke out, *Lung Tuan* was remembered by the A-H Navy and bought for a sum of 1.3 million crowns. She was towed from Trieste to Pula on 28 August¹³, to be taken-over by the Navy as *Warasdiner* and commissioned on 10 September of the same year.



Destroyer *Warasdiner* (ex-*Lung Tuan*) with raised funnels; twin torpedo tubes forward and aft could easily be recognized. (Traiber)

SHIPS' NAMES

Some of the *Huszár* class destroyers were named after soldiers: *Huszár* was of course named after hussars, light cavalrymen of the Hungarian and Polish origin, *Ulan* (lancer) was heavy cavalryman armed with a lance, *Streiter* means fighter or skirmisher, *Wildfang* was hunter, and *Scharfschütze* sniper. *Uskoke* was named after *uskok* (plural: *uskoci*), a Croatian corsair on the Adriatic in Austrian service, fighting against the Ottoman Empire and the Republic of Venice, and *Pandur* was a member of the Austrian irregular light cavalry from Southern Hungary and Slavonia (Northern

¹³ According to BILZER, *Torpedoschiffe*, page 83, the vessel was towed to Pula on 1 August and commissioned as *Warasdiner* on 28 August 1914.

Croatia), fighting in 17th and 18th Century. **Csikós** is a Hungarian riding shepherd, and **Turul** was the mythological bird that led the Hungarian king Arpad and his people from Asia to Europe. Another group of destroyers was named after geographical terms: **Reka** is a small river east of Gorica or Gorizia, **Dinara** and **Velebit** are Croatian mountains, but **Warasdiner** was named after soldiers of the 16th A-H Infantry regiment from Varaždin, that distinguished themselves during first battles in Serbia in Summer of 1914.

Building data of the *Huszár* class destroyers

	Shipyard	Keel laying	Launching	In service
<i>Huszár</i>	Yarrow, London	14/11/1904	31/05/1905	04/07/1905
<i>Ulan</i>	S. T. T., Trieste	27/09/1905	08/04/1906	21/09/1906
<i>Streiter</i>	S. T. T., Trieste	30/10/1905	16/06/1906	31/12/1906
<i>Wildfang</i>	S. T. T., Trieste	07/12/1905	29/08/1906	15/06/1907
<i>Scharfschütze</i>	S. T. T., Trieste	12/04/1906	05/12/1906	15/09/1907
<i>Uskoke</i>	S. T. T., Trieste	01/09/1906	20/07/1907	31/12/1907
<i>Turul</i>	Danubius, Rijeka	27/07/1907	09/08/1908	31/12/1908
<i>Pandur</i>	Danubius, Rijeka	02/08/1907	25/10/1908	31/01/1909
<i>Csikós</i>	Danubius, Rijeka	21/02/1908	24/01/1909	16/11/1909
<i>Reka</i>	Danubius, Rijeka	13/08/1908	28/04/1909	31/12/1909
<i>Velebit</i>	Danubius, Rijeka	05/11/1908	24/07/1909	31/12/1909
<i>Dinara</i>	Danubius, Rijeka	28/01/1909	16/10/1909	31/12/1909
<i>Huszár II</i>	Naval Arsenal, Pula	29/11/1909	20/12/1910	08/02/1911
<i>Warasdiner</i>	S. T. T., Trieste	01/04/1911	03/04/1912/	28/08/1914

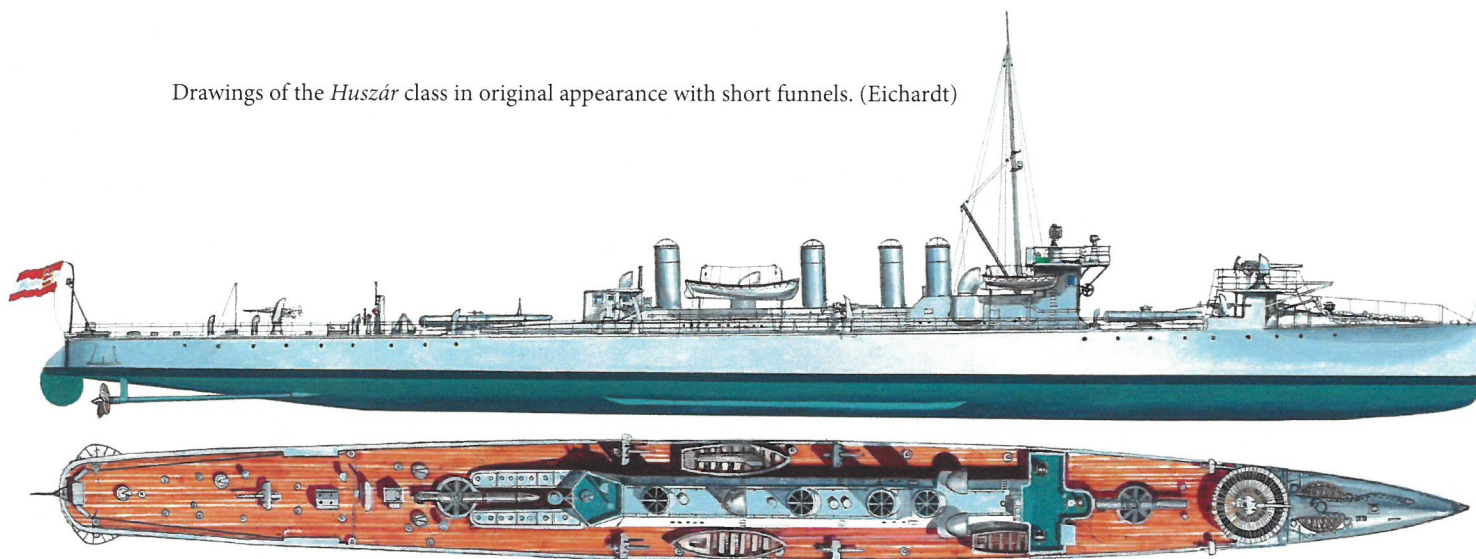
APPEARANCE AND PROPULSION

These A-H destroyers were similar to other vessels of this type built at this time in Great Britain. The plans of the *Ikazuchi/Akebono* class were slightly modified, and the commando bridge moved further aft, thus the first funnel was bent backwards and moved nearer to the second funnel. The result was an unusual distribution of four funnels, with inequal distances in-between, in relation of 1:2:4. Because of the separate “lonely” fourth funnel, the ships were nicknamed “field kitchens” by their crews. The A-H vessels had initially low funnels, being raised in 1911/12, as the smoke became a nuisance for the crew on deck and on the bridge as well. On *Ulan*, *Streiter*, *Wildfang*, *Turul*, *Pandur*, *Csikós*, *Reka*, *Scharfschütze* and *Warasdiner*, the funnels were seemingly replaced by new longer funnels, and on *Huszár* (II), *Dinara*, *Velebit*, and *Uskok* only lengthened by an additional segment.

The ships were flush-decked, but the forecastle was partially raised in a turtle-back shape, raising from the stem to the gun platform with the forward 7 cm gun sited at the aft edge of the forecastle. Under the gun platform there was an armored conning tower. This deck shape was typical for many destroyers and torpedo boats of this era, reinforcing the hull forward and maintaining the continuity of the deck, and improving the seakeeping characteristics, but had a less weight than the straight forecastle. The gun crew was still exposed to waves and spray, as the waves were overflowing the turtle-back forecastle at higher speeds. On the forecastle two anchors of the Admiralty type were stowed (one with

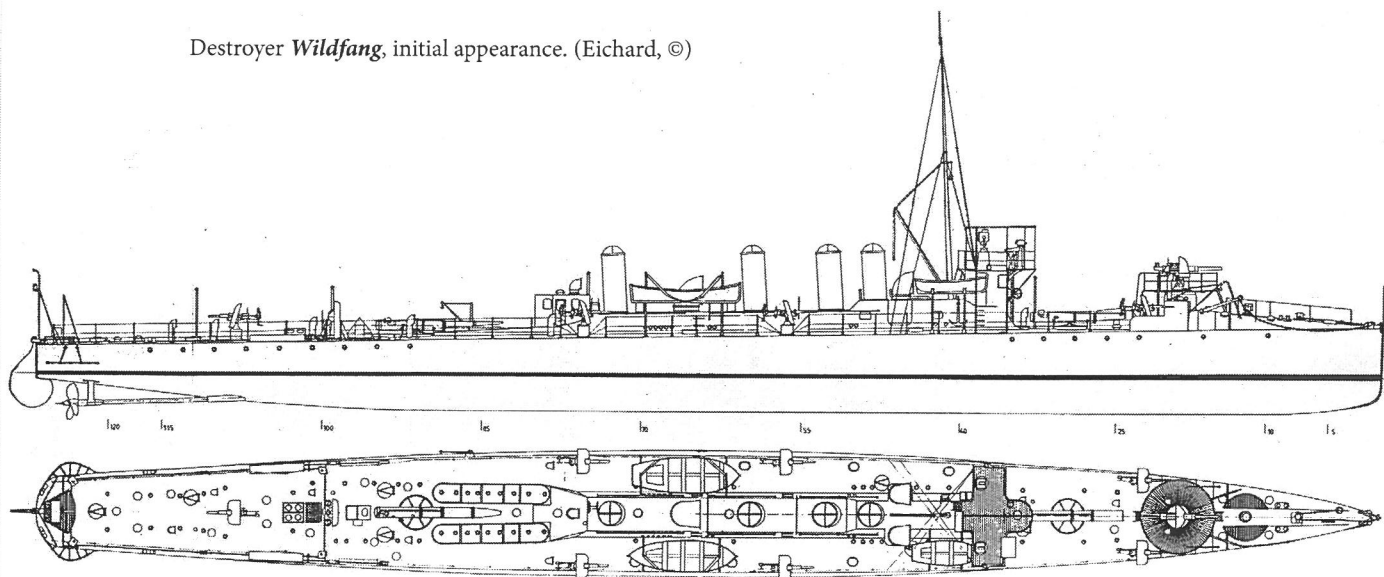
a mass of 419 kg and another with 422 kg), with the windlass in the middle. On both sides of the gun platform, on the main deck level, two lighter 47 mm guns were mounted.

Drawings of the *Huszár* class in original appearance with short funnels. (Eichardt)



The forward trainable torpedo tube was mounted at the main deck level, between the forward gun platform and the commando bridge, erected above the “knee” of the bent funnel No. 1. The enclosed bridge was crowned by an open steering and compass platform, with two searchlights on the bridge wings for night operations. Aft the bridge followed low superstructures above the boiler rooms and enclosing four funnels, and the foremast was erected at the rear edge of the bridge, being the only mast, with a derrick for the small yawl, stowed on the starboard side. Under the yawl the reserve anchor with a mass of 107 kg was stowed. Other two boats (one cutter on the starboard, and a whaler or a larger yawl on the portside) were carried in davits alongside the funnels Nos. 3 and 4. Aft the fourth funnel the galley was arranged, and abaft this small deckhouse were the skylights of the machinery room, followed by the aft torpedo tube, the reserve steering platform with a large steering wheel, being protected by a forward shield, and the aft 47 mm gun on the quarterdeck. Remaining four 47 mm guns were mounted in pairs in the broadside, like the forward pair. The tiller was located right aft on the deck and covered by gratings, with tiller chains leading to both sides and then forward over pulleys, being connected by steel tiller ropes with the steering machine and the auxiliary wheel.

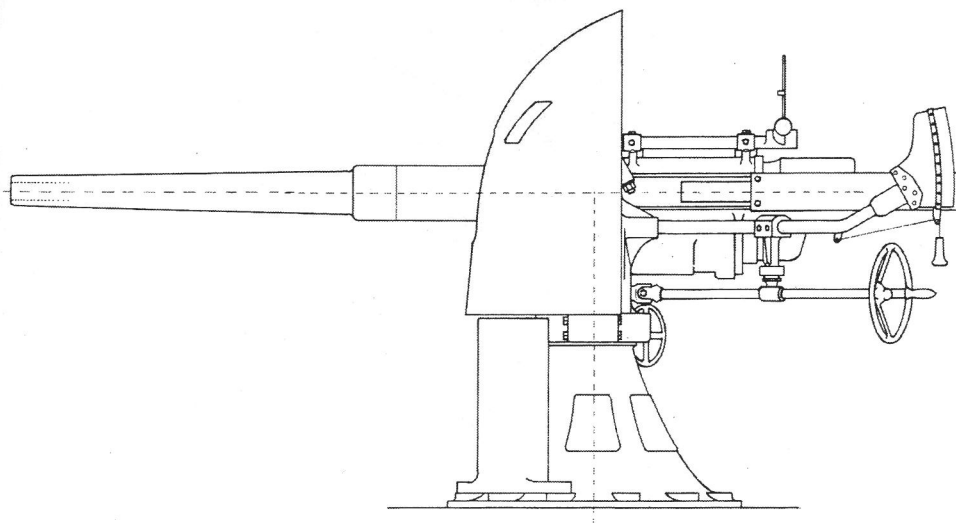
The hull had a straight bow, and the main deck was slightly dropping from the bow to the transom stern. The keel was straight too, to rise slightly under the aft torpedo tube to the stern. Two three-blade screws were on both sides of the semi-balanced rudder. The crews accommodation was arranged under the forecastle, with ammunition chambers in the lower hold, where reserve torpedoes and torpedo heads were stored as well. The first boiler was positioned under the commando bridge in the forward boiler room, with the stokehold between the first and second boiler. The same arrangement was repeated in the aft boiler room. The ventilation cowls were situated above stokeholds of both boiler rooms (two smaller cowls above the forward, and one bigger cowl above the aft boiler room). Aft the second boiler room there was the machinery room with two steam machines installed side by side, followed by the auxiliary machinery room and the ammunition chamber for the 47 mm shells. Aft were the CO's and the officers' quarters, followed by accommodations for chiefs and petty officers, and by storerooms right aft.

Destroyer *Wildfang*, initial appearance. (Eichard, ©)

The design displacement amounted to 390 tonnes (386 tonnes on *Warasdiner*) and the full load displacement to 420 tonnes (404.8 tonnes on *Warasdiner*), the length between the perpendiculars to 67.13 m, over all to 63.39 m, the beam to 6.25 m, with the draught between 1.78 and 1.85 m (1.80 m on *Warasdiner*).

The steam was generated by four Yarrow water-tube boilers with a total heating area of 1,208 square meters, arranged between two boiler rooms, and their pressure amounted to 18.6 atmospheres. Two four-cylinder triple-expansion steam machines reached the total output of 6,000 hp (4,412 kW) at 380 rpm, and on *Wildfang* 6,500 hp (4,779 kW) were reached on trials. During service, speeds between 28 and 28.5 knots were reached, with *Wildfang* reaching 29 knots. *Warasdiner* (ex-*Lung Tuan*) had a total output of 6,747 hp (4,961 kW) and she reached 30.6 knots. All destroyers could carry 90.6 tonnes of coal in their bunkers (with 90 tonnes of coal and 11 tonnes of oil on *Warasdiner*), enabling a range of 500 miles at 28 knots (or of 1,200 miles at 15 knots on *Warasdiner*). On all vessels of the class two aft boilers were rebuilt for additional oil burning in 1916. On *Warasdiner* one boiler had the additional oil burning from the outset, and another boiler was thus rebuilt in 1916.

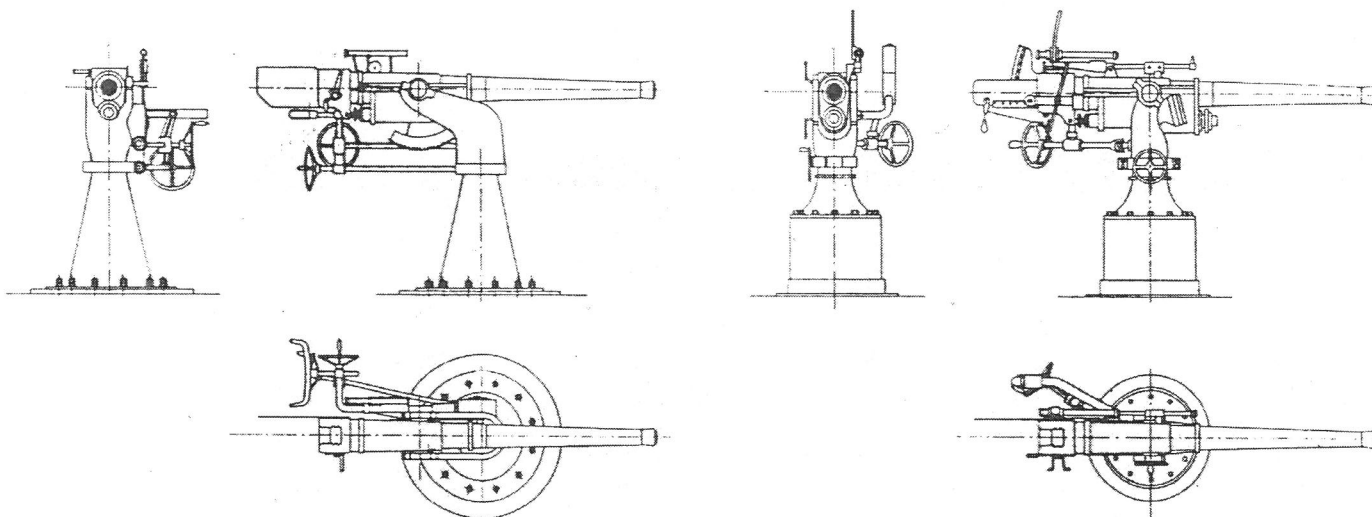
7 cm (66 mm or 2.6in) L/45
gun with a shield. (Sieche)



ARMAMENT AND COMPLEMENT

The vessels built in Trieste and Rijeka were initially armed like *Huszár*, but their armament was reinforced in 1913: instead of seven 47 mm guns, five 7 cm (66 mm or 2.6in) L/30 guns were mounted, one right aft and other four in the broadside, athwartship of the funnels. New *Huszár* was re-armed in the same way. To save weight, these short 7 cm guns were having no shields. In 1915, on *Velebit* and *Csikós* their aft single torpedo tubes were replaced by twin torpedo tubes¹⁴, and each destroyer of the class was additionally armed with one 8 mm Schwarzlose M.07/12 anti-aircraft machine-gun. In 1917, all were to be re-armed with new 7 cm L/45 K.07 guns in anti-aircraft mountings, and one of the 7 cm L/30 guns was also to be mounted in an anti-aircraft mounting (being called BAG = *Ballon-Abwehr-Geschütz*), but this was not carried out on all vessels.

The long 7 cm L/45 K.09 TAG (torpedo-boat-defense) guns were produced by the Skoda factory in Pilsen. The mass of the barrel with the breech amounted to 547 kg, with the whole mounting having a mass of 1,860 kg, the mass of the single round amounted to 8.2 kg, and of the shell (projectile) to 5 kg. The highest elevation amounted to +20°, the lowest depression to -10°, the muzzle velocity to 725 m/sec, and the greatest range to 6,000 m at the elevation of +9°56'.

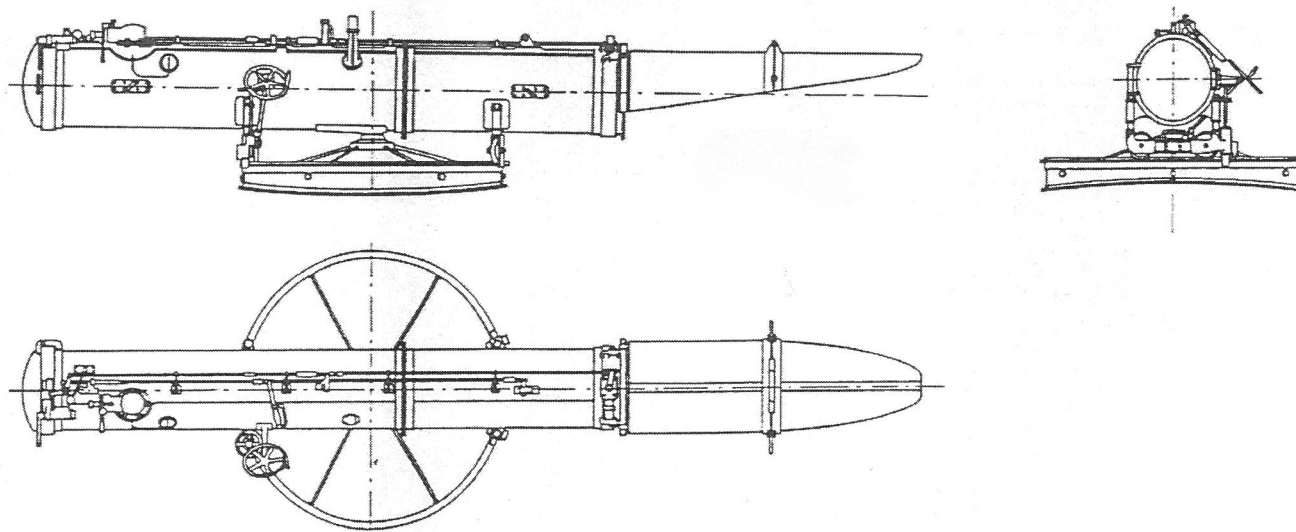


7 cm L/30 anti-aircraft and anti-torpedo-boat guns. (Kovács)

The short 7 cm L/30 anti-aircraft (BAG) and anti-torpedo-boat (TAG) guns, produced by Skoda as well, had a total mass of 788 kg (TAG) or 1,074 kg (BAG), the highest elevation amounted to +25° (TAG) or +90° (BAG), and the lowest depression to -14° (BAG) or -5° (TAG). The mass of the round amounted to 5.78 kg, and the range to 5,000 m at +12° or to 7,000 at +25°.

The 47 mm guns had a mass of 240 kt, and the whole mounting weighed 490 kg. They had an elevation between +20° and -10°, the mass of the shell amounted to 1.5 kg and of the complete round to 2.75 kg, the muzzle velocity to 825 m/sec and the range to 4,000 m at 8°11'.

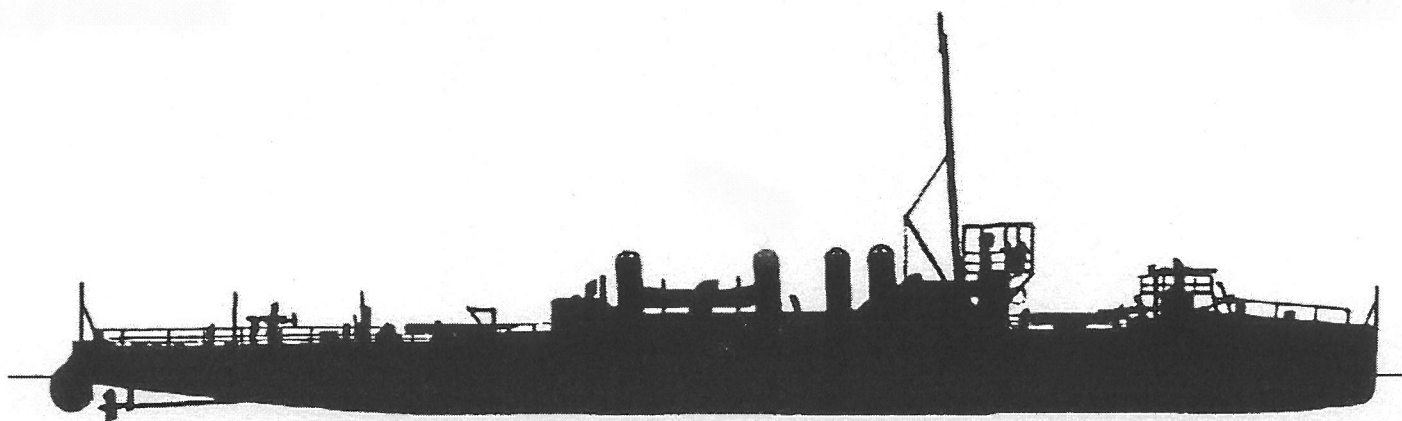
¹⁴ These twin torpedo tubes came from the cruisers of the *Spaun* and *Improved Spaun* classes, being replaced there by twin 21in torpedo tubes.



45 cm (17.7in) torpedo tube. (Kovács)

Lung Tuan was initially armed with two 3in (7,6 cm) L/50 and four 47 mm L/50 Armstrong guns, and with two twin 45 cm (17.7) Whitehead torpedo tubes. As *Warasdiner* she was re-armed with two 7 cm L/45 K.09 guns (one forward and another aft), and four 7 cm L/30 in the broadside. In 1915, two of these were mounted in BAG mountings. In the same year, she was armed with the 8 mm M.07/12 anti-aircraft machine gun as well.

All destroyers had a complement of 70 men, five of them officers.

Original appearance of a *Huszár* class destroyer with short funnels. (Kovács)

Tactical and technical data of the *Huszár* class destroyers

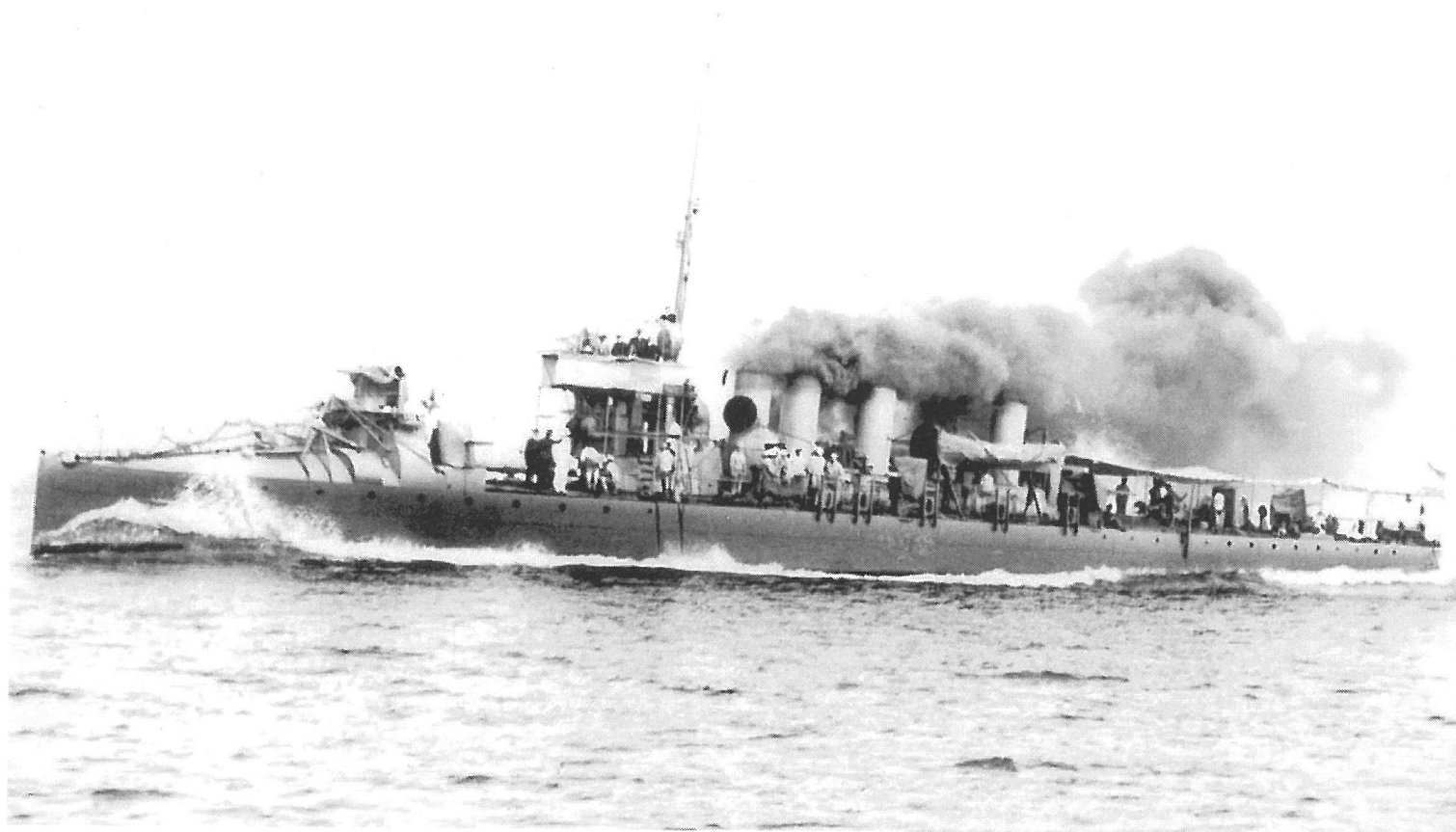
Displacement	Design displacement 390 tonnes, full load 420 ts (<i>Warasdiner</i> 386 ts/ 404.8 ts).
Dimensions	Length 68.39/67.13 m, beam 6.25 m, draught 1.78/1.85 m (<i>Warasdiner</i> 1.80 m)
Propulsion	6,000 hp (<i>Wildfang</i> 6,590 hp, <i>Warasdiner</i> 6,747 hp).
Speed	Average 28 knots, maximum 28,5 kts (<i>Wildfang</i> 29 kts, <i>Warasdiner</i> 30.6 kts).
Fuel	90.6 tonnes of coal (<i>Warasdiner</i> 90 tonnes coal and 11 tonnes oil); later all other destroyers could carry additional 10 tonnes of oil.
Range	500 miles at 28 knots, <i>Warasdiner</i> 1,200 miles at 15 knots.
Armament	As built: one 7 cm L/45 and seven 47 mm L/44, two 45 cm torpedo tubes. <i>Warasdiner</i> initially two 7.6 cm (3in) L/50, four 47 mm L/50, four 45 cm t. t. From 1913/14 onwards: one 7 cm L/45, five 7 cm L/30, two 45 cm t. t. (<i>Velebit</i> & <i>Csikós</i> : three 45 cm t. t.); from 1915 onwards: one 8 mm mg. <i>Warasdiner</i> from 1914: two 7 cm L/45, four 7 cm L/30, four 45 cm t. t.; from 1915: one 8 mm mg.
Complement	70 (five officers).

SERVICE AND FATES

HUSZÁR took her name over from the brig *Hussar*, built in 1842-47 as *Ussaro*. After being commissioned, she was attached to the Torpedo Flotilla, and after some necessary modifications, she was subjected to extensive trials to gain experiences for the building of serial destroyers in Trieste and Rijeka. On 3 December 1908 (as mentioned), she stranded because of a navigational error on the Albanese shoal. The salvage was not successful, and only her boilers with other parts of the hull and equipment were salvaged, being later used for the building (allegedly an intensive repair) of the new destroyer with the same name (see under *Huszár* II).

The destroyers of the *Huszár* class served at the beginning of the World War One with the 1st and 2nd Torpedo Flotillas, thus *Velebit*, *Dinara*, and *Reka* comprised the 3rd, with *Csikós*, *Scharfschütze*, and *Pandur* comprising the 4th Torpedo Vessel Group (Destroyer Group) of the 2nd Torpedo Division, a unit of the 1st Torpedo Flotilla. *Turul*, *Wildfang*, and *Huszár* (II) comprised the 5th, and *Streiter*, *Ulan* and *Uskoke* the 6th Torpedo Vessel (Destroyer) Group of the 4th Torpedo Division, a unit of the 2nd Torpedo Flotilla.

ULAN was after commissioning attached to the Torpedo Flotilla too, and her funnels were later lengthened, with her armament modified. Before the war, she cruised with the active Squadron in the Eastern Mediterranean, to be put into reserve in June 1913, and reactivated as the World War One broke out. She was moved to Boka kotorska, and her CO was KK Egon Panfili. On 16 August 1914, she was patrolling together with the cruiser *Zenta* in blockade duty off the Montenegrin coast, as this small detachment was attacked by the whole French battle fleet, accompanied by the French and British armored cruisers. *Zenta* was sunk, but thanks to her high speed *Ulan* escaped to Boka. Already on 28 August, she shelled Montenegrin coastal positions, covering the A-H iron-clad *Monarch* shelling the Montenegrin wireless station on Voluvica near Bar on 17 September, and she took part at an operation against the harbor of Bar on 18 October. On 27 December, *Ulan* escorted the tender *Emma* with the submarine *Ub. 12* on the transfer leg to Makarska.

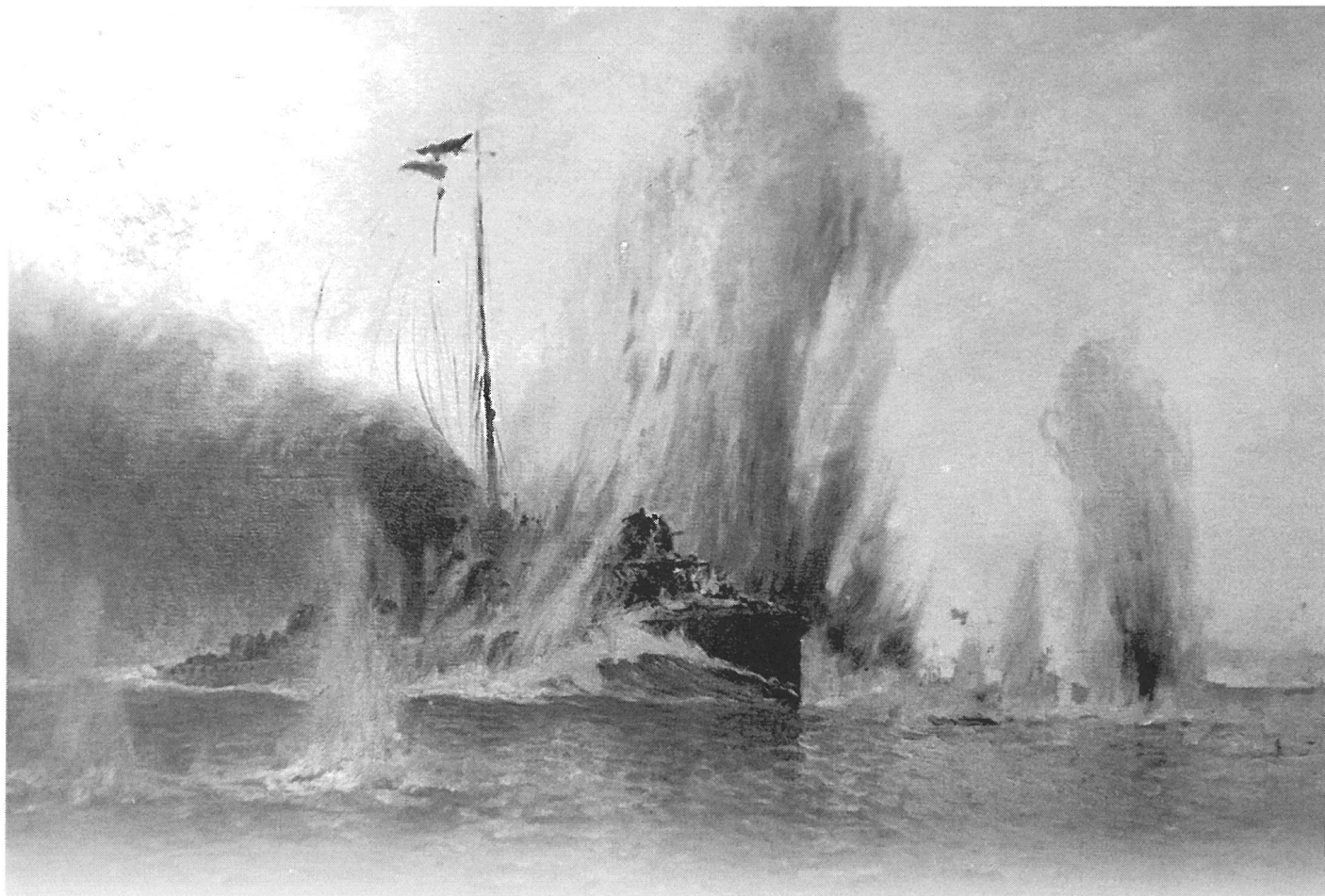


Destroyer *Ulan*, initial appearance. (Lemachko)

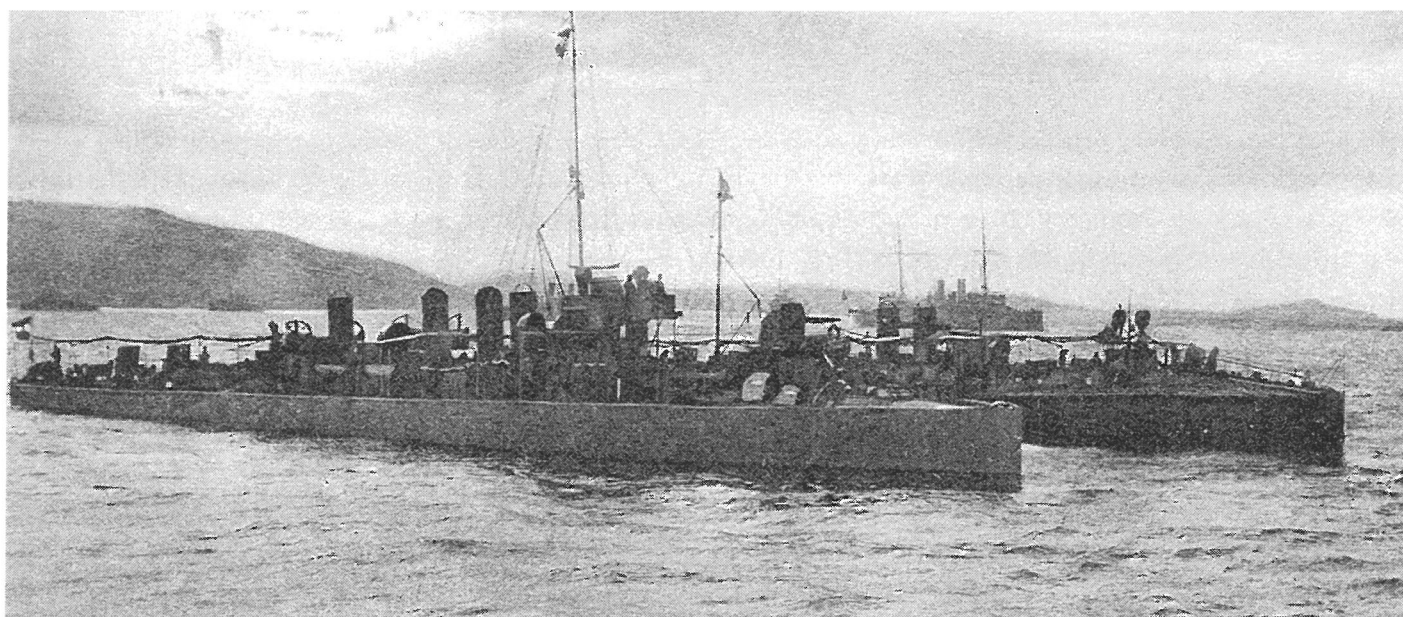
On the first day of the year 1915, *Ulan* searched in the Mljet Channel for floating mines, torned-off by strong winter storms; on 1 February she took part in a submarine hunt off Budva, and on 18 February, she was sent with the destroyer *Streiter* to attack the Montenegrin Royal Yacht *Rumija* in the Bar harbor. In the night to 2 March, she covered other ships attacking the harbor of Bar, to be moved to Pula on 3 April. On 1 June 1915, she was laying mines in the Bay of Trieste, and on 17/18 June 1915, she was sent with the cruiser *Admiral Spaun* to a reconnaissance mission off Italian coast. On 19 June, *Ulan* took part at an attack on Rimini with the cruisers *Novara* and *Admiral Spaun*, and the destroyers *Wildfang*, *Uskoke*, and *Scharfschütze*. During following days, she was sweeping mines in the Bay of Trieste again, and on 6 July, *Ulan* escorted the minelayer *Chamäleon* to a mining operation off the Po estuary¹⁵. Her CO at this time was KK Franz Wutscher. On 25 October, *Ulan* was sent to cover the A-H seaplanes after their attack on Venice, and as she was returning to base, she was attacked near Novigrad by an enemy submarine whose torpedo missed.

Early in 1916, *Ulan* was still with the 2nd Torpedo Flotilla, and from 28 August 1916 onwards, she was stationed in Šibenik, escorting convoys, and searching for enemy submarines. Early in 1917, she was in Pula again, and during the overhaul in May 1917, she was armed with a 7 cm anti-aircraft gun.

¹⁵ SIECHE, *Zeittafel 1914-1916*, p. 72, was not mentioning *Ulan* taking part at this operation, only *Uskoke*, *Wildfang*, and *Csikós*, together with the torpedo boats 77 T and 78 T.



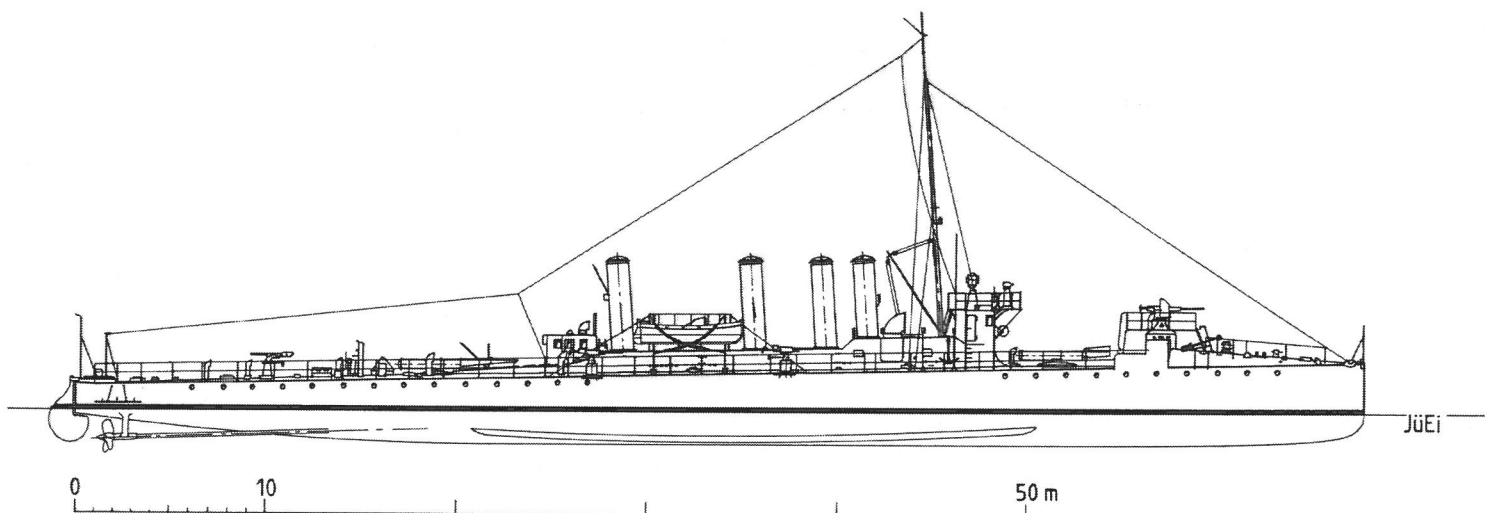
Ulan escaping to Boka kotorska under French fire on 16 August 1914. (Kircher)



Ulan with a torpedo boat. (Schrott)

From 24 May onwards, *Ulan* was stationed in Đenovići in Boka kotorska, and escorted convoys between Split, Spilice and Durazzo. In the night to 17 December, she attacked Brindisi with the 4th Torpedo Division. During 1917, she escorted a total of 26 convoys, was four times sweeping mines and on one occasion hunting submarines. In late 1917, *Ulan* was docked in Pula, and on 2 February 1918, she escorted with other destroyers the battleships of the *Erzherzog* class from Pula to Boka, being sent there to quench the sailors mutiny that in the meantime got out on its own. Thus *Ulan* returned to Pula on 4 February. Between May and October 1918, she was overhauled in Pula and received new boilers, and in late 1918, she was allegedly commanded by KK Stanislaus Witkowski¹⁶. As the A-H fleet was handed over to the representatives of the National Council of the S. H. S. State (State of Slovenes, Croats, and Serbs) on 31 October 1918, *Ulan* hoisted the Croatian flag too. After Italian troops entered Pula, all ships were seized and later distributed among victors, with *Ulan* being ceded to Greece, and renamed *Smyrni*, to be deleted and scrapped only in 1931.

STREITER took over the name of a former gunboat and was before the war taking part at training and diplomatic missions in the Eastern Mediterranean, also during the Balkan Wars. Shortly before the war, on 24 July 1914, *Streiter* was moved on to Boka kotorska, and on 10 August, she delivered in Bar – together with the cruiser *Szigetvár* – the official declaration of the sea blockade of the Montenegrin coast. Her CO was at this time KK Ernst Edler von Račić. On 16 August, *Streiter* was underway to relieve *Zenta* and *Ulan* on their blockade duty but was forced to retreat after the whole French battle fleet appeared on the horizon. On 28 August, and again on 18 October, *Streiter* shelled the Montenegrin coastal positions, and on 17 September 1914, 1 and 2 March 1915, she covered other warships shelling the coast.



Streiter with raised funnels.; *Wildfang* was similar. (Eichardt ©)

Streiter was moved to Pula on 2 April 1915; between 19 and 22 May 1915, she served in the patrol line off Palagruža, and during the large attack of the A-H battle fleet on Italian coastal cities on 24 May, she shelled the Italian signal station near Torre di Mileto. In June 1915, she took part at the search for floating mines off the Istrian coast and towed the damaged seaplane *L 42* to Trieste. In 1916, she was in Pula again, and she shelled the coastal railroad and the factories on Italian coast off Giulianova. On 16 July, she was laying mines off Vis. Late in 1916, she was overhauled, and

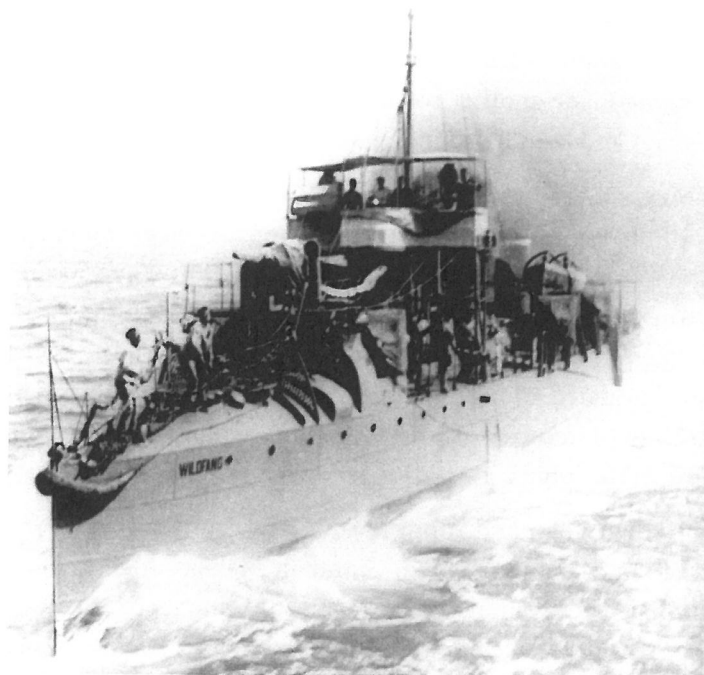
¹⁶ Oliver TRULEI, *Abgelehnt – die erfolglosen Ansuchen von k. (u.) k. Marineoffizieren um den Militär-Maria-Theresia-Orden 1789 – 1931*, Oliver Trulei, Wien, 2015, p. 74.

from April 1917 onwards, she was in Boka kotorska again, at this time under command of KK Adolf von Pokorny. On 22/23 April 1917, she was sent with *Uskoke* and *Warasdiner* to a reconnaissance sortie into the Otranto Straits, but without meeting the enemy. From 11 July onwards, *Streiter* was in Pula, and was sent on 29/30 September, together with *Turul*, *Huszár*, *Velebit*, and the torpedo boats *90*, *94*, *98*, and *99*, to the Po estuary, to cover the retreat of some A-H seaplanes after their attack. During this sortie, the A-H force encountered enemy warships and there followed a skirmish with the Italian flotilla leader *Sparviero*, and the destroyers *Vincenzo Giordano Orsini*, *Giuseppe Cesare Abba*, *Giovanni Acerbi*, *Francesco Stocco*, *Audace*, *Ardente*, and *Ardito*. The A-H destroyer *Velebit* was damaged in the process and towed by *Streiter* back to Pula. On the Italian side *Sparviero* was hit four times and damaged too. In November and December 1917, *Streiter* was again on scouting missions along the Italian coast, and shelled Cortellazzo on 17 December. Her CO at this time was Friedrich Ritter (Knight) Luschin von Ebengreuth, being followed by KK Josef Seiler, and finally by KK Albert Machnitsch. In 1917, *Streiter* escorted 31 convoys, were four times searching for mines, and nine times supporting the A-H seaplanes. Early in 1918, she escorted six convoys, were six times searching for mines, twice supporting the seaplanes, and once hunting enemy submarines. In the night of 15/16 April, *Streiter* was escorting the steamer *Petka*, but was accidentally rammed by her, to sink one hour after midnight near Lovran, about one mile away from the coast. Two crew members perished, and others were rescued by *Petka* and brought to Rijeka, where another seaman died from his wounds.



47 mm L/44 gun on *Streiter* before new guns were mounted. (Greger)

WILDFANG was after commissioning attached to the Squadron, cruised in the Eastern Mediterranean during the Balkan Wars in 1912/13, and was from 5 December 1913 onwards, attached to the 1st Torpedo Flotilla. She was rearmed with bigger guns in 1913/14 and was in service again on 25 June 1914 under KK Franz Scheiwein, being followed by KK Maximilian Hilscher. Early during the war, *Wildfang* was stationed in Boka kotorska, and in Pula after 6 August. She operated in the Bay of Trieste, later from Šibenik and again from Pula, and performed a scouting mission south-west of Vis on 6 December 1914. After being docked in Pula, she moved to Šibenik again on 11 February 1915. *Wildfang* took part at the large attack of the A-H fleet on Italian coastal cities in the early morning hours of 24 May 1915, shelling with the cruiser *Admiral Spaun* the signal station on the Cretaccio island.



Destroyer *Wildfang* seen from forward. (Sieche)

On 18 June, she attacked Rimini together with the cruiser *Novara*, and later in June, she was sweeping mines off the Istrian coast. In the night to 6 July 1915, together with *Ulan* and *Csikós*, and two torpedo boats, she escorted the minelayer *Chamäleon* to a minelaying operation off the Po estuary¹⁷. *Wildfang* was later searching for mines again, and on 25 November 1915, she allegedly towed the seaplane *L 61* to Boka. In the *Ordre-de-Bataille* for 5 December 1915, KK Johannes Prinz von und zu Liechtenstein was mentioned as the CO of *Wildfang*. In late 1915, *Wildfang* was often underway, to support the A-H seaplanes returning from their missions against targets on the Italian coast, and on 3/4 Januar 1916, she was laying mines in the Bay of Trieste, together with *Uskoke* and ten torpedo boats.

On 2 February 1916, she sailed from Pula to Boka, escorting with four torpedo boats the armored cruiser *Sankt Georg* and the cruiser *Helgoland*. On 3 February, *Wildfang*, *Sankt Georg*, *Helgoland*, and three torpedo boats shelled Italian railway stations in Ortona and San

Vito. One Italian armed train opened fire, but without damaging the A-H warships. On 6 February 1916, as *Wildfang* was waiting for the A-H seaplanes *L 61* and *L 82*, returning to Boka kotorska, as she was attacked by British cruiser *Liverpool* and Italian destroyer *Bronzetti*. Seven A-H torpedo boats sortied out to help, and after a short battle all A-H warships reached Boka unscathed. During the same afternoon, *Wildfang* sortied again with two torpedo boats, to hunt (in vain) for the French submarine *Ampère* (LV Devin). On 26 February, she was sent to Durazzo with the destroyers *Csepel*, *Balaton*, *Orjen*, *Turul*, and *Huszár*, being led by the cruiser *Helgoland*. On 31 March, she rescued the crew of a steamer sunk off the harbor of S. Giovanni di Medua (Shëngjin), and on 15/16 June 1916, she encountered three enemy destroyers from a group of four Italian and five French destroyers led by British cruiser *Weymouth*. They were all covering the attack of Italian motor torpedo boats *MAS 5* and *MAS 7* that entered the harbor of S. Giovanni di Medua but found no targets there. *Wildfang* was near, escorting two steamers, and she hurried towards the harbor, but during the skirmish both sides suffered no losses. On 1 August 1916, *Streiter* sortied out with *Warasdiner* to shell the Italian harbor Molfetta one day later, and on the return leg of their sortie both vessels were received by the A-H cruiser *Aspern* with the torpedo boats *80 T* and *85 F*¹⁸, coming from Đenovići. As both groups already joined, they were attacked by the British cruiser *Liverpool* with the Italian *Nino Bixio*, and Italian destroyers *Ipolito Nievo*, *Antonio Mosto*, *Rosolino Pilo* with torpedo boats *8 PN*, *10 PN*, *11 PN*, *12 PN*, *40 PN*, and *46 OS*¹⁹. Three quarters of an hour later, the destroyer *Turul* arrived with the torpedo boat *51* to help. Allegedly the French destroyers *Commandant Bory* and *Bisson* took part at the combat as well, together with the Italian destroyers *Ardente*, *Impavido*, and *Giuseppe Cesare Abba*, but this could not be confirmed. The A-H submarine *Ub. 4* tried in vain to torpedo the cruiser *Bixio* or the destroyer *Pilo*, and the A-H submarine *Ub. 16* was near as well; all A-H warships reached Boka without damages about 1130 hours.

On 28/29 August 1916, *Wildfang* was covering – together with *Turul*, *Warasdiner*, *Orjen*, *Balaton*, and the torpedo boats *83 F*, *85 F*, *87 F* and *88 F* – the armored cruisers *Sankt Georg* and *Kaiser Karl VI* that were sent together with the

¹⁷ SIECHE, *Zeittafel 1914-1916*, p. 72, mentions *Uskoke* instead of *Ulan*.

¹⁸ Between November 1913 and May 1917, the A-H torpedo boats had a letter after their number, denoting the builder: *E* meant England, *T* was staying for Trieste, *F* for Fiume (Rijeka), and *M* for Monfalcone.

¹⁹ Italian torpedo boats were designated after their builders as well: *PN* meant Pattison, Naples, *OS* was staying for Orlando, Sestri Ponente, and *OL* for Orlando, Livorno.

cruisers *Novara* and *Helgoland* off Brindisi, to provoke a sortie of enemy warships and to lure them into an ambush set by the A-H submarines *Ub. 16*, *Ub. 17*, *Ub. 15*, and *Ub. 11*. The operation ended without success, as thick fog prevented the A-H warships to be seen at all. On 26/27 September, *Wildfang* made another sortie from Boka with *Warasdiner*, *Huszár*, and *Turul*, to disturb the maritime traffic between Valona and Brindisi, but no enemy vessels were met.

Early in 1917, *Wildfang* was stationed in Lošinj. On 10 May, she was attacked by enemy aircraft off Rovinj, but suffered no damages. After the visit of new Emperor Karl at Pula on 3 June, *Wildfang* left the harbor on the same evening, to wait for the A-H seaplanes. At 0123 hours on the 4 June 1917, *Wildfang* hit a floating mine near Cape Pinida on the island of Veli Brijun. The first explosion detonated the forward ammunition chamber and cut-off the whole forward part of the hull up to the commando bridge. There followed three more explosions of the boilers, and allegedly a fourth, as the aft ammunition chamber detonated too. The destroyer sank over the stern ten minutes later, taking with her the CO KK Albert Machnitsch with another officer and 23 crew members. Others were rescued by the torpedo boat 74 that was accompanying *Wildfang*.

After being commissioned, *SCHARFSCHÜTZE* served with the Winter and Summer Squadrons, and early in 1908, she took part at the cruise in the Western Mediterranean, visiting Malta, Barcelona, Gibraltar, Malaga, Algiers, Bizerte, Tunis, and Corfu. In 1913, she took part at the international "fleet demonstration" against Montenegro. She was re-armed in 1913/14 and was commissioned again on 27 July 1914 under KK Bogumil Nowotny²⁰. On 7 August 1914, *Scharfschütze* sailed with the A-H battle fleet to receive the German battle cruiser *Goeben* with the cruiser *Breslau*, but as these were not returning to the Adriatic, sailing to Constantinople instead, the fleet returned to Pula. On 11 August, *Scharfschütze* was transferred to Boka kotorska, and shelled Montenegrin coastal positions on 28 August, 3 September, and 17 October 1914, and covered together with *Ulan* the A-H ironclad *Monarch* as she shelled the Montenegrin wireless station on Voluvica near Bar on 17 September. In early 1915, *Scharfschütze* was stationed in Šibenik, and she took part at the attack of the A-H fleet on Italian coast on 24 May 1915. She entered stern-first the narrow canal leading to Porto Corsini, the harbor of Ravenna, and directly shelled Italian targets, to return to the sea steaming forward.

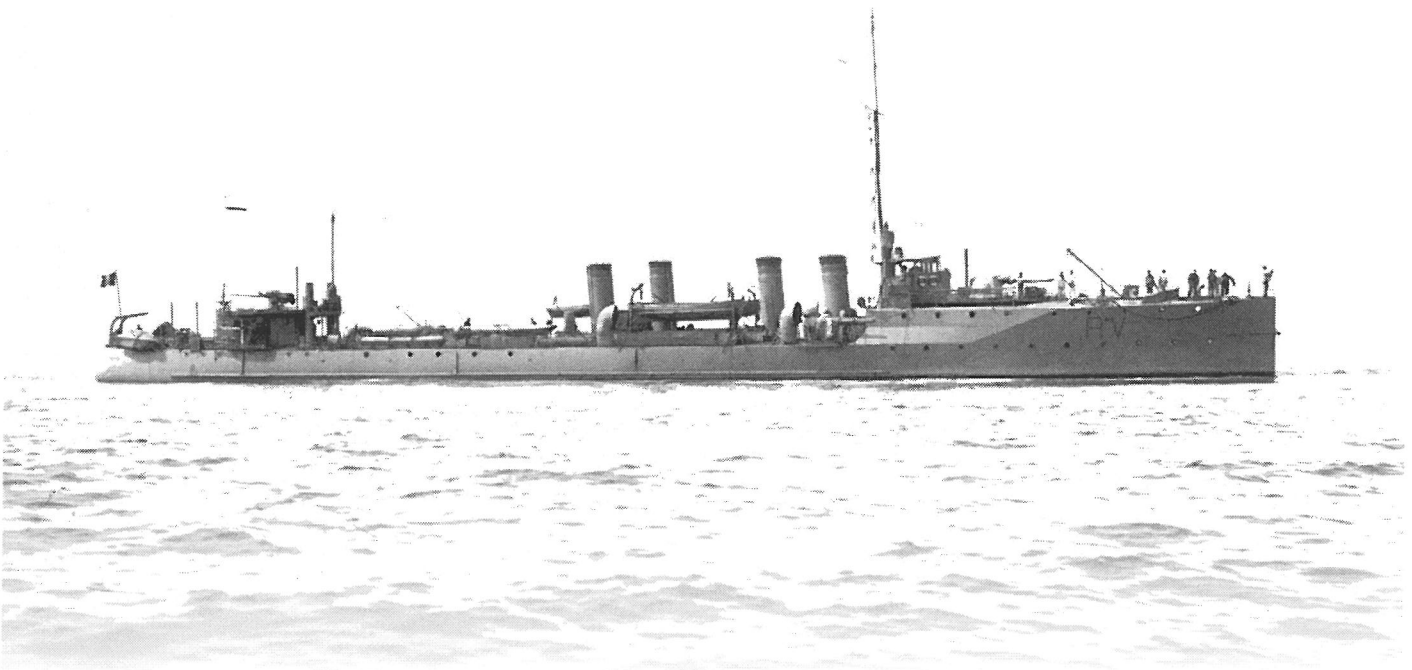


Scharfschütze entering the Porto Corsini canal backwards on 24 May 1915. (Willy Stöwer, via Baumgartner)

²⁰ Bogumil Nowotny (1871, Wieliczka near Krakow – 1960, Castel Gandolfo), was after 1918 Colonel in the newly established Polish Navy, and her first C-in-C, but he resigned his post in 1919 as his reforms were rejected. He lived in pension in Opatija since 1933, and early in 1945, he escaped to Italy from the partisan treat, and died there 15 years later.

On 18/19 June, she took part at the attack on Rimini, together with the cruisers *Admiral Spaun* and *Novara*, and the destroyers *Wildfang* and *Uskoke*. On 1 and 23 July, she was laying (the swept Italian!) mines off Trieste. Between 27 July and 24 August 1915, she was docked in Pula, to take part afterwards at several naval operations, like patrols and support missions for the A-H seaplanes returning from their attacks. On 10 September, off the island Sv. Ivan na pučini (San Giovanni di Pelago) near Rovinj, she was attacked without success by an enemy submarine. On 1 October she rammed another submarine that managed to escape and was attacked – again without success – by a third submarine on 10 November. She towed the damaged seaplane *L 69* to Pula on 10 December 1915 and received new boilers in Pula in early 1916. On 3 May 1916, as she was waiting (together with *Csikós*, *Pandur*, *Velebit*, and six torpedo boats) for the A-H seaplanes, returning from an attack on Ravenna and Porto Corsini, she took part at the skirmish with Italian flotilla leaders *Cesare Rosarol* and *Guglielmo Pepe*, and the destroyers *Giuseppe Missori* and *Francesco Nullo*.

Scharfschütze stranded in the Veruda cove on 23 August, and was towed to Pula, with repairs being completed on 22 October 1916. Since 26 October, she was in Boka again, and took part at the attack against enemy ships in the Otranto Straits on 22/23 December, together with *Reka*, *Dinara*, and *Velebit*. At this occasion, allegedly two drifters were sunk²¹, and *Casque* from a group of six French destroyers damaged. Five Italian destroyers with the British cruiser *Gloucester* hurried to help, but they met the French detachment in the dark, and the destroyers *Abba* and *Casque* collided, to be afterwards rammed by the French *Boutefeu*; all three Entente destroyers were sent to repairs²². In 1917, *Scharfschütze* was intermittently in Boka and Pula, she escorted several convoys, was searching for mines, and covering A-H seaplanes returning from their missions. She repelled a submarine attack on a convoy off Albania on 26 September 1917. Since 19 November, she operated on several occasions along Italian coast, and her new CO was KK Alexander von Gröller.



French destroyer *Commandant Rivière* belonged with *Casque* and *Boutefeu* to the *Bouclier* class, armed with two 3.9in (100 mm) and four 2.6in (65 mm) guns, and four 17.7in t.t. (Rastelli)

²¹ In fact the drifters *Gowan Lea* and *Our Allies* were only slightly damaged by the A-H artillery. (SIECHE, *Zeittafel 1914-16*, p. 208).

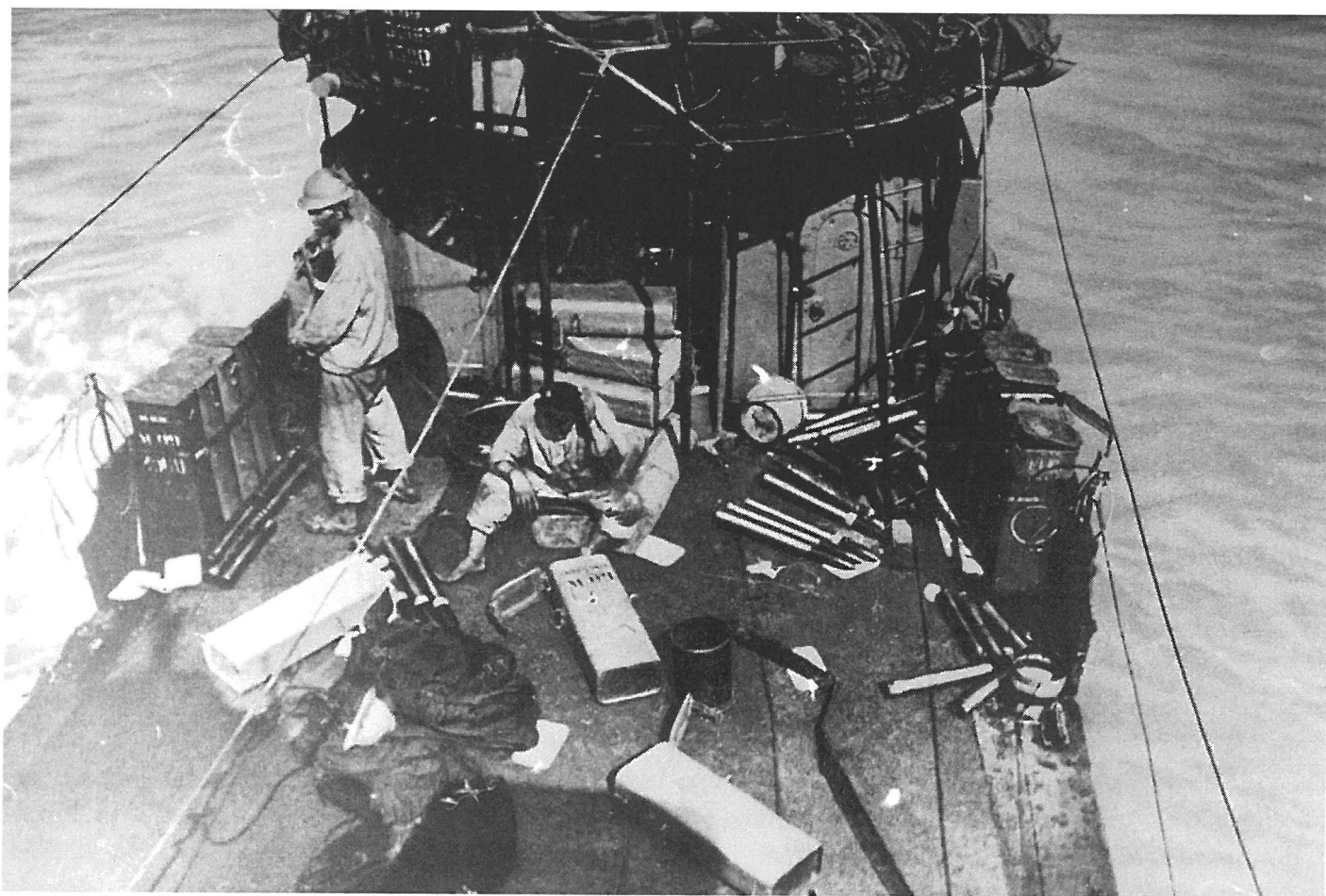
²² Even French historians praised enemy courage and determination, as four older and weakly armed A-H destroyers engaged the stronger adversary without hesitation.

Scharfschütze took part at the shelling of Cortellazzo on 19 December 1917, escorted other convoys, and four times secured A-H seaplanes. On 15 January 1918, she arrived at Zadar, on 23 January at Šibenik, and on 27 January at Boka. On 1 February she left Boka, steaming to Durazzo, and returned to Boka with the steamer *Gorizia* on 2 February, as the sailors mutiny was in full swing. As her CO sighted the red flag on the ironclad *Kronprinz Erzherzog Rudolf*, he proceeded to the coal pier in Spilice, and planned to sail later to Dubrovnik. In the afternoon of 2 February, as the ironclad *Rudolf* passed near, aiming her guns at the destroyer, von Gröller hoisted the red flag, lowering it after the danger was over. Torpedo tubes on *Scharfschütze* were aimed at the ironclad too, to respond to the gunfire with torpedoes, but luckily it was not needed. As it became clear that the coastal batteries remained loyal, *Scharfschütze* was moored in Hercegnovi, and her CO sent the crew to the local barracks. The mutiny ceased on the same day, and the destroyer was moved to the north. Already on 8 February, she was escorting the steamers *Meran*, *Szent László*, and *Budapest* from Portorož to the south. Near Molunat, four or six enemy vessels were sighted, and *Scharfschütze* made a sharp turn. The steamer *Budapest* was unable to avoid the collision, and she rammed the destroyer aft, heavily damaging her stern. *Scharfschütze* was provisionally repaired in Tivat, and was towed to the repairs to Pula, where she received a new stern. The repairs were completed on 5 August 1918, and already on 12 August, the destroyer rescued the damaged seaplane *K 217*, downed after a combat with three enemy airplanes. At this time, the destroyer was commanded by KK Severin Brettner.



Crew of *Scharfschütze*. (Bilzer, via Schrott)

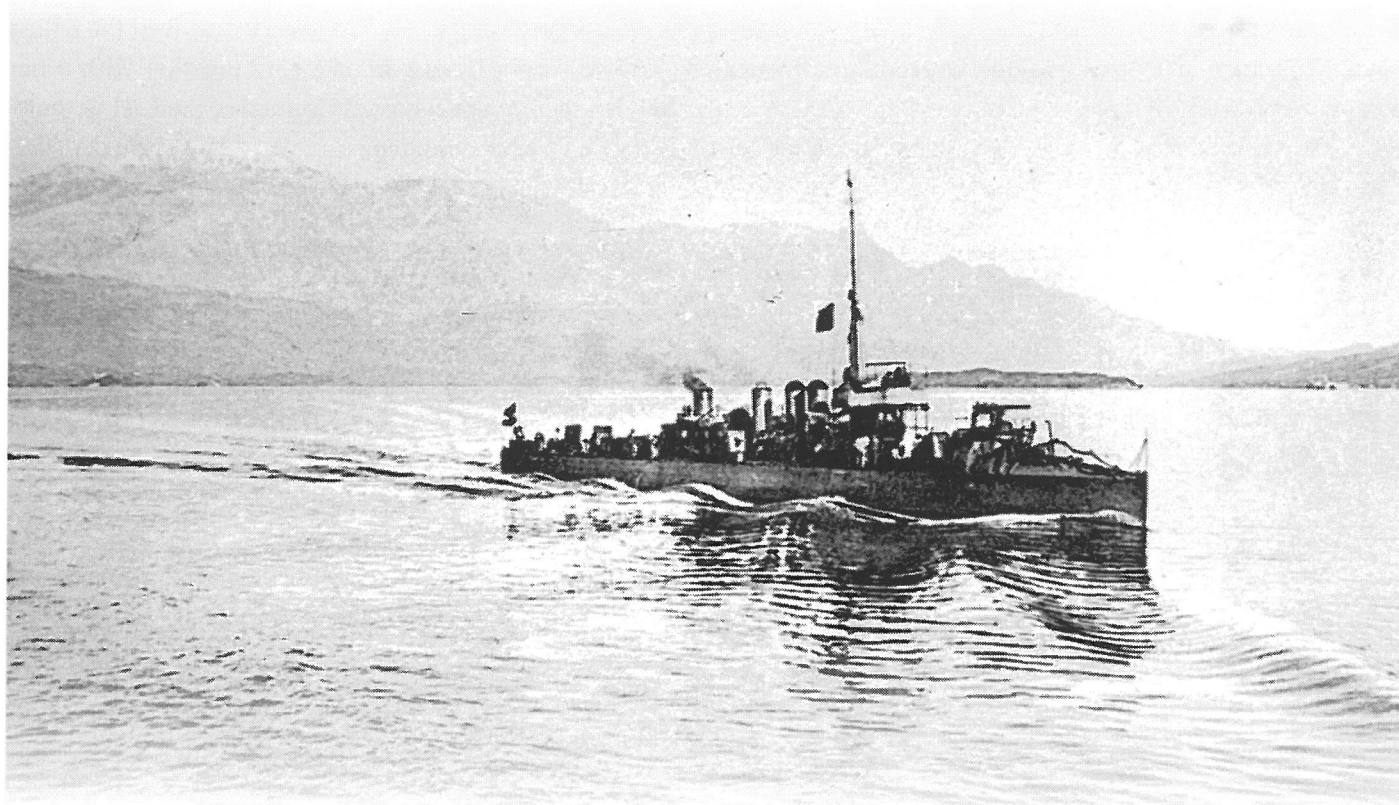
Scharfschütze was sent to Boka again on 1 September and was in Durazzo together with the destroyer *Dinara* and the torpedo boat 87 (ex-87 F) on 2 October 1918, as this harbor was attacked by a large enemy naval force. The Entente squadron included the Italian armored cruisers *San Giorgio*, *San Marco*, and *Pisa*, the British light cruisers *Lowestoft*, *Dartmouth*, and *Weymouth* with eight British destroyers and nine Italian torpedo boats, the Italian cruiser *Marsala* with seven destroyers, and some other smaller warships, like the U.S. submarine chasers. Both groups were covered from the sea by the Italian battleship *Dante Alighieri* with other warships and a score of submarines. Both A-H destroyers, and the torpedo boat were successfully repelling enemy attacks during this last surface naval combat of the A-H warships. After British cruiser *Weymouth* was damaged by a torpedo fired from the A-H submarine *Ub. 31*, the enemy force retreated. The torpedo boat 87 was slightly damaged with an unexploded torpedo, and two crew members on *Scharfschütze* were killed by shell fragments, with five being wounded. In the harbor the steamer *Stambul* and several coastal sailing ships were sunk, but many houses were damaged by shelling. The U.S. submarine chasers reported to have sunk two submarines in the process²³. In fact both engaged submarines, *Ub. 31*, and *Ub. 29*, survived the Allied attacks, to return later to Boka. On 1 November 1918, *Scharfschütze* was in Boka kotorska, and together with other present warships she hoisted the Croatian flag, as the fleet was handed over to the National Council of the S. H. S. State, but she was later seized by the victors. In 1920 she was ceded to Italy and later scrapped.



On deck of *Scharfschütze* after the battle of Durazzo. (Schrott)

²³ It was in fact the greatest battle of the U.S. naval vessels during the World War One, and the legend about the sinking of these submarines lived long in American newspapers, and in the official documents as well.

USKOKE was after completion in 1908 sent to a cruise in the Western Mediterranean, received stronger artillery in 1912, and cruised afterwards in the Eastern Mediterranean. She was temporarily disarmed in 1913, to be commissioned again on 14 June 1914, under KK Werner Freiherr von Marschall. On 24 July, she was moved to Boka kotorska, and on 24 August, she covered the cruiser **Szigetvár** shelling Montenegrin coastal positions. On 28 August, she was shelling enemy positions as well. As the French fleet appeared in front of Boka on 17 October, **Uskoke** sortied out together with the torpedo boat **13**, and the submarines **Ub. 3** and **Ub. 4** to attack the enemy. Two surface warships tried to lure the French warships nearer to submarines: **Ub. 4** attacked unsuccessfully the French armored cruiser **Waldeck-Rousseau** but was detected and shelled by the enemy. **Uskoke** and **Tb. 13** came under fire too, but all vessels retreated unscathed, and the French left the dangerous zone as well. **Uskoke** was laying mines in front of Bar on 15 November and was exchanging shots with the Montenegrin battery on Voluvica on 18 November.



Destroyer **Uskoke**, initial appearance with short funnels. (Schrott)

She escorted the submarine **Ub. 6** from Boka over Makarska to Pula on 14 February 1915, and on 24 March, she escorted the submarine **Ub. 5** to Boka. On 17 April, she covered the submarine **Ub. 12**, towed by the auxiliary **Gigant** from Boka to Pula and was on patrol off Palagruža and Lastovo in mid-May. During the attack of the A-H fleet on Italian coastal cities on 24 May, **Uskoke** shelled Tremiti. From 1 June 1915 onwards, she was in Pula and was laying mines off Trieste. On 17/18 June she covered with **Wildfang**, **Ulan**, **Scharfschütze** and five torpedo boats the cruisers **Novara** and **Admiral Spaun** during their attacks on Italian coast in the Bay of Trieste and in front of Venice. There followed similar operations against Pesara and Fano on 27 July, and **Uskoke** was later laying mines again. From 11 February 1916 onwards, she was stationed in Šibenik, and on 16 March she helped by the salvage of **Turul**, stranded off Cape Ploče on 13 March. **Uskoke** was again shelling the targets on the Italian coast on 23 June 1916 and was later laying mines. In October and November 1916, her boilers were overhauled in Pula, and later she took part in some minesweeping operations. From 31 December 1916 onwards, she was in Boka again, and made a sortie into the Otranto Straits with **Streiter** and **Warasdiner** on 23/24 April, but no targets were found. Later **Uskoke** was searching for submarines, and was hit by

a lighting on 26 December, suffering damages to her wireless aerial and the compass. On 4 April 1918, *Uskoke* escorted the torpedo boat **96** that was towing a launch toward Italian coast, for a “commando attack” by a group of A-H seamen, going to capture one of more Italian motor torpedo boats (MAS) in Ancona. The operation went awry, and all seamen were captured. On 10 June 1918, *Uskoke* was to take part at the large attack against the Otranto Barrage, within one of the support groups, but the raid was cancelled after the Italian MAS sank the A-H battleship *Szent István*. On 20 June, the destroyer returned to Pula, to be overhauled there, but the works were not completed before the war was over. Her Commanding officers in 1918 were KKs Otto Bäuml, Friedrich Hauer, and Konstantin Zemplen respectively. In 1920, *Uskoke* was ceded to Italy and later demolished.

TURUL was attached to the Squadron after completion in 1909, and to the 2nd Torpedo Flotilla in 1912, to be later re-armed with new guns. Before and during the opening phases of World War One, *Turul* was stationed in Boka kotorska, and from 3 August to early September 1914, she was overhauled in Pula. Her CO was *LSLt* Wolfgang Hahn Edler von Hahnenheim, being promoted later to KK. *Turul* was sent to a scouting mission to the Drim mouth on 5 October, to be later stationed in Pula and Šibenik, and to patrol off Vis. She took part at the sinking of French submarine *Curie*, entangled in the anti-submarine boom at the entrance when trying to enter the harbor of Pula on 20 December 1914. In 1915, *Turul* was mostly in Boka, and between 30 May and 6 June of the same year, her boilers were replaced in Pula. On 10 July 1915, she towed the German submarine *UC 15* (under the A-H designation *Ub. 19*) from Boka to the Otranto Straits.²⁴ *Turul* shelled Montenegrin coastal positions on 16 July 1915. On 11 August, together with *Huszár* (II), *Pandur*, and *Warasdiner*, she attacked Bari and Molfetta. On 5 December, she attacked with the cruisers *Novara* and *Helgoland* the harbor of Shengjin, and on 26 February 1916, the harbor of Durres. She was docked in Pula in April and May 1916, and when returning to Boka, she stranded off Cape Ploče on 13 June. She was salvaged on 16 June and repaired up to 31 July of the same year.

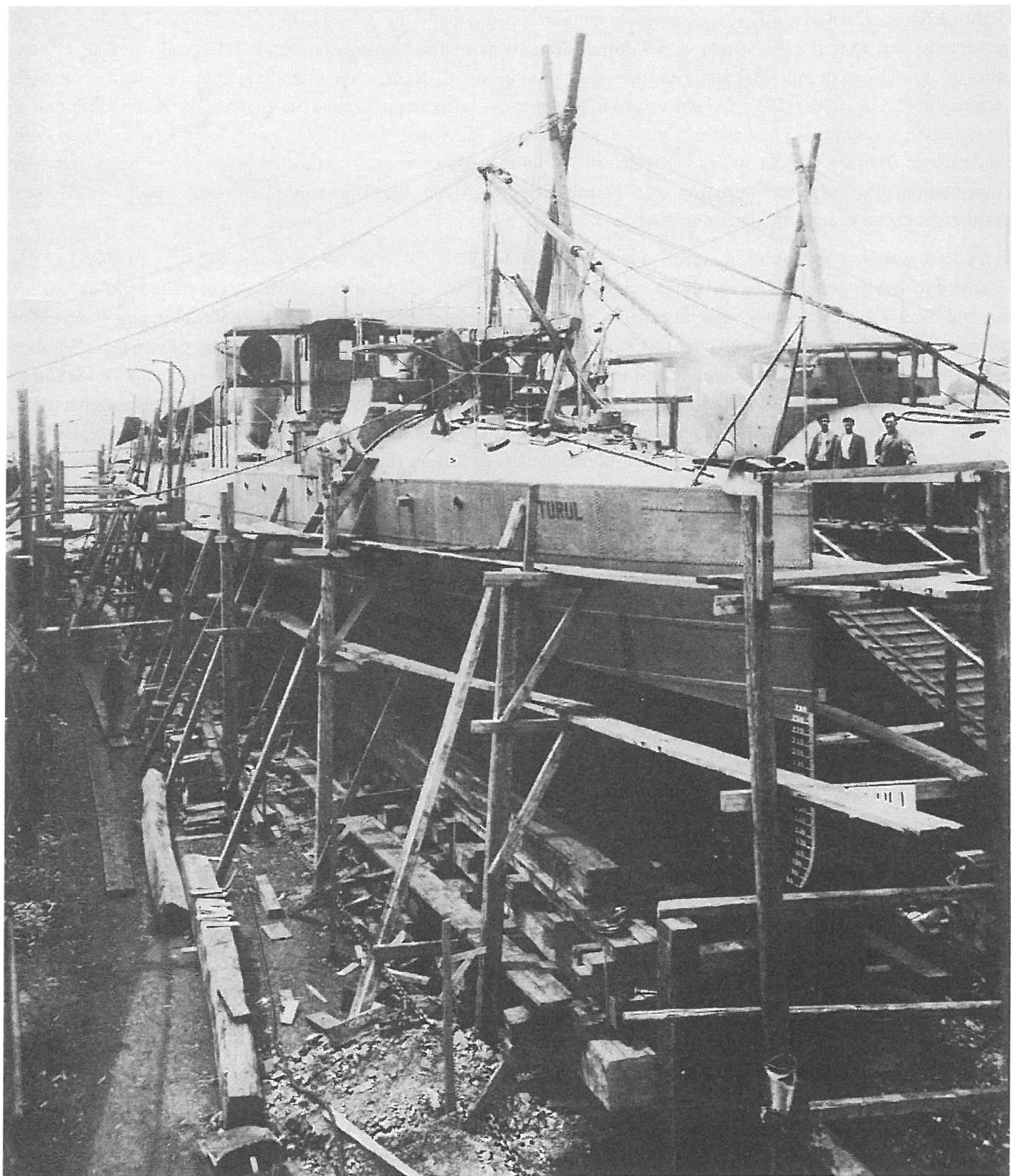
On 2 August 1916, she steamed out to help the destroyers *Wildfang* (see there) and *Warasdiner*, as they were returning from an attack against Molfetta. She sortied out again with other warships (see under *Wildfang*) on 28/29 August, to cover A-H cruisers luring the enemy from Brindisi to be attacked by the A-H submarines, but this operation was disturbed by thick fog.

Until the end of 1916, *Turul* took part at operations off the Albanian coast, and was re-armed in Pula between January and March 1917, receiving her anti-aircraft gun mountings. At this time, her CO was KK Erwin Mayer. In August 1917, *Turul* was overhauled again, and on 29 September 1917, there followed the already mentioned battle with Italian destroyers near Sv. Ivan na pučini (see under *Streiter*).

Her boilers were replaced in October and November 1917, and on 19 December she shelled Cortellazzo, to escort later some convoys. On 2 February 1918, she was sent to Boka as one of the escorts for the battleships of the *Erzherzog* class that were to put down the local sailors mutiny, but the mutiny was over almost on its own.

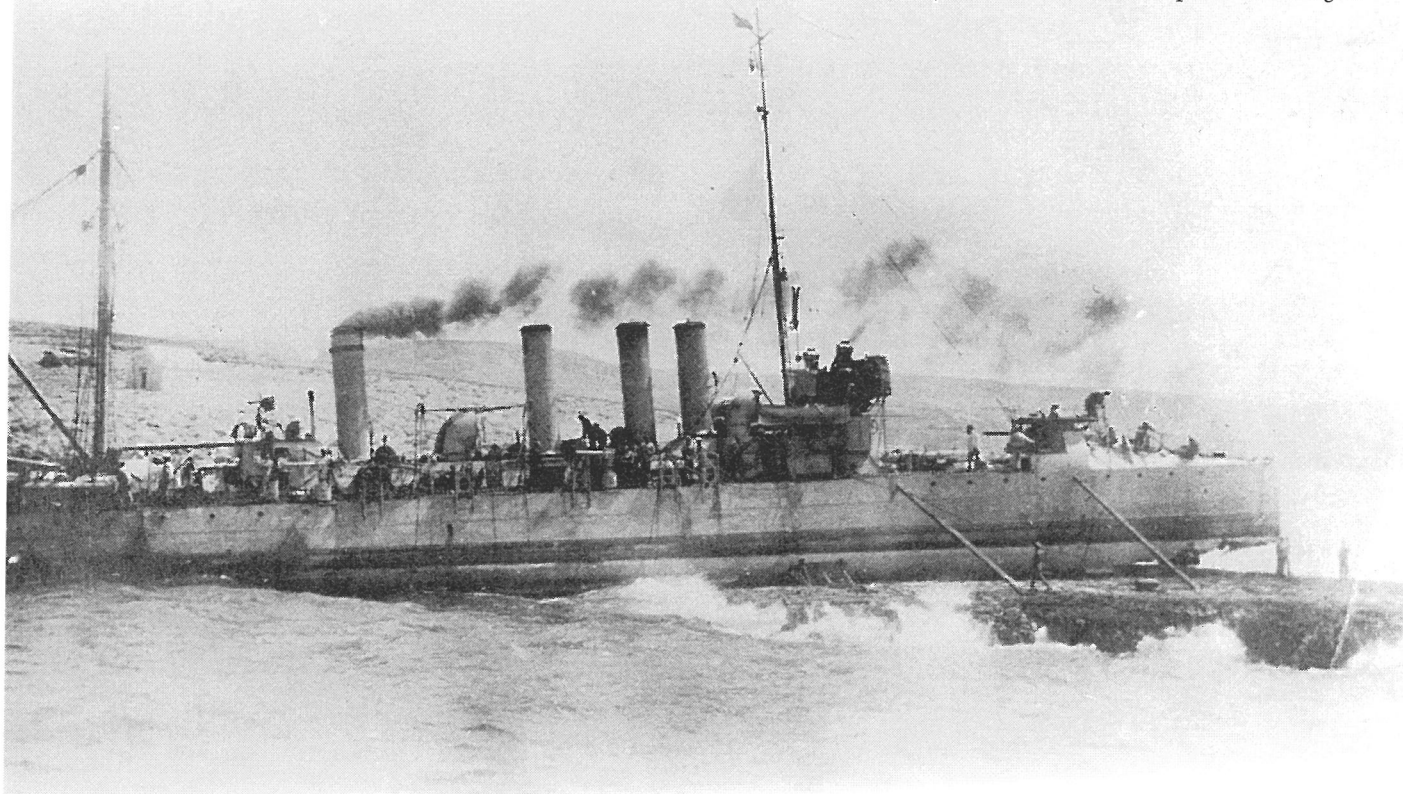
Turul returned to Pula and moved to Boka again on 22 February. Under her new CO, KK Theodor Braun, she sortied out from Boka with *Huszár* (II), *Reka*, and *Pandur* on 7 May 1918, to shell the railroad on the Italian coast near Silo, but the operation was postponed by a gale, as the destroyers were forced to take shelter in the harbor of Vis. She sailed out on the following day, attacked without success the Italian railroad, and went to Split, to return afterwards to Boka. On 31 August, *Turul* was moved to Pula again, to operate later in the Bay of Kvarner. During 1918, she escorted 55 convoys, was once supporting the A-H seaplanes, and five times sweeping mines. As the war came to an end, she was in Pula, and hoisted with other warships the Croatian flag on 31 October 1918, as the fleet was handed over to the National Council of the S. H. S. State. She was later seized by the Italians, and was officially ceded to Italy in 1920, to be scrapped afterwards.

²⁴ In the first phases of the war, up to 26 August 1916, German submarines operated under the A-H flag, to operate clandestinely against Italian ships, as Germany was initially not in war with Italy.

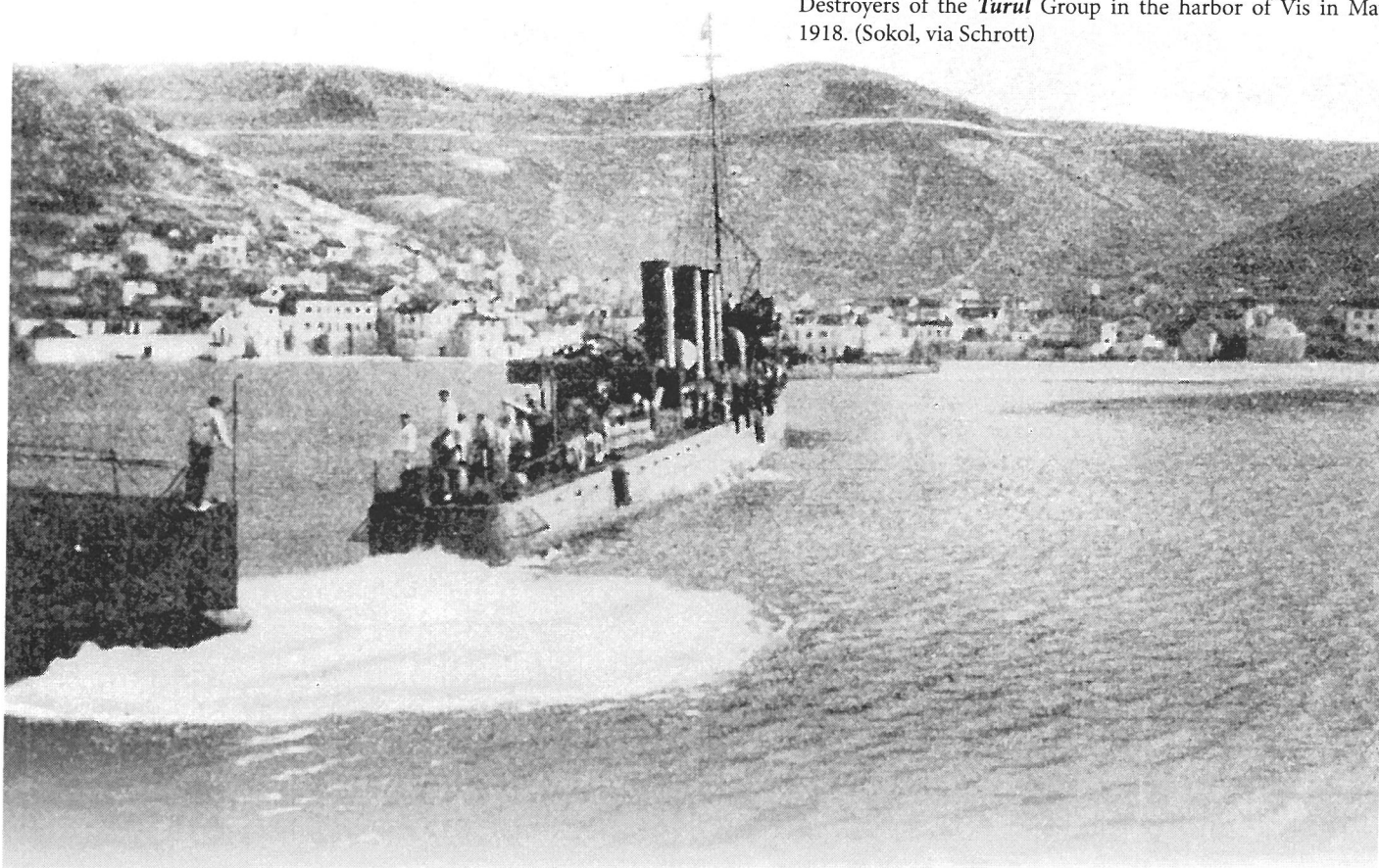


Destroyer *Turul* on the stocks in Rijeka; on the right the second destroyer of this class, most probably the *Pandur*. (3. Maj)

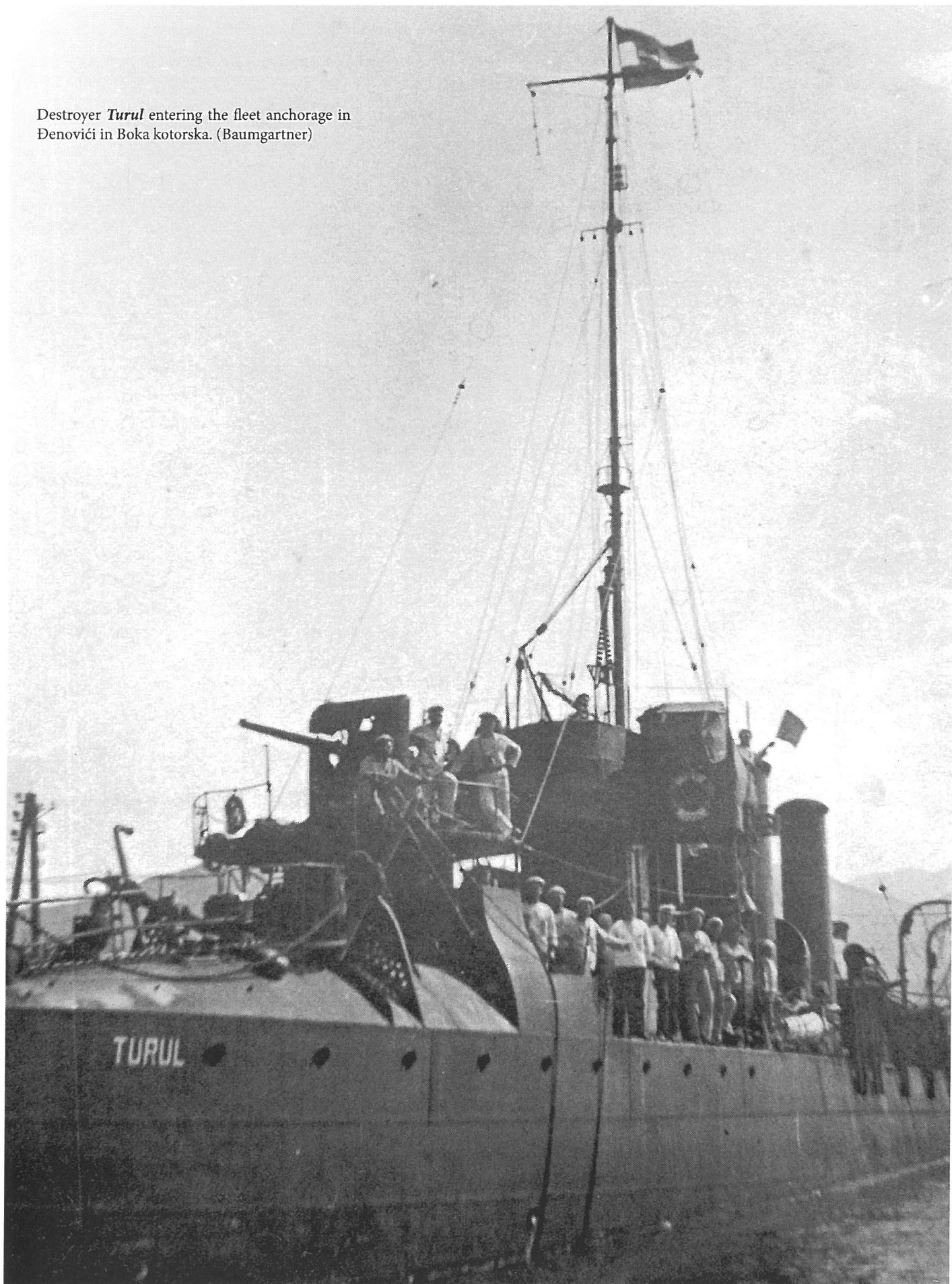
Destroyer *Turul* stranded off Cape Ploče. (Selinger)



Destroyers of the *Turul* Group in the harbor of Vis in May 1918. (Sokol, via Schrott)

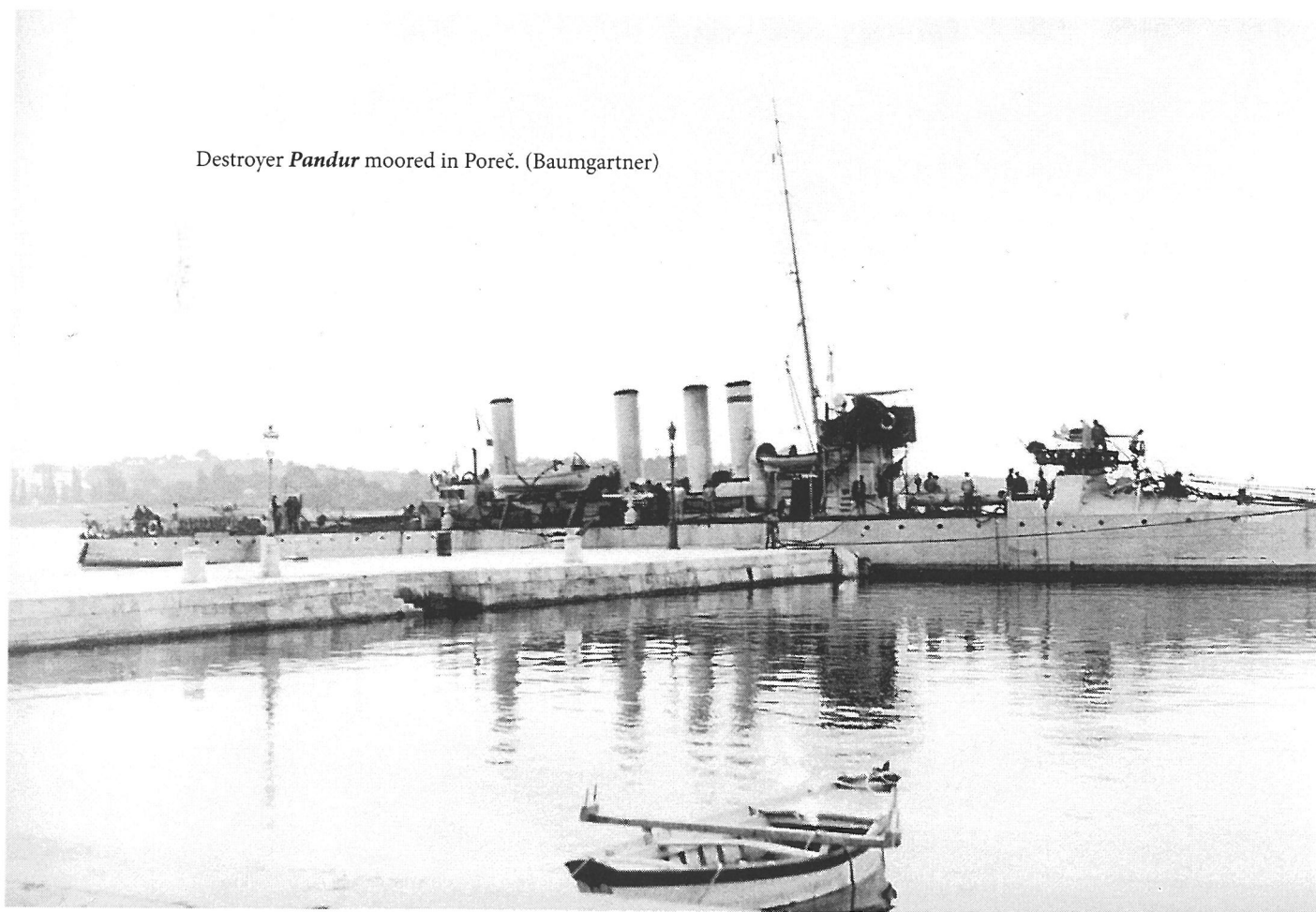


Destroyer *Turul* entering the fleet anchorage in
Đenovići in Boka kotorska. (Baumgartner)



After being commissioned, **PANDUR** served with the Squadron, taking part at a cruise to the Eastern Mediterranean, visiting Zante, Milos, Santorini, Chios, Smyrna (Izmir), Samos, Rhodes, Mersin, Alexandretta (Iskenderun), Beirut and Alexandria. She was later attached to the Torpedo Flotilla and the Reserve Squadron, was re-armed in 1913/14, and recommissioned again on 1 August 1914, under KK Eduard Cossovel, to be sent to Šibenik. She was scouting off Palagruža on 17 October, went later to Pula, and was sent to Vis with other ships of the 1st Torpedo Flotilla (led by the cruiser **Helgoland**), as the French fleet appeared there on 2 November. On 17 December, she was hunting for submarines near the island of Zlarin with the torpedo boat **73 F**, as she was allegedly unsuccessfully attacked by an enemy submarine²⁵.

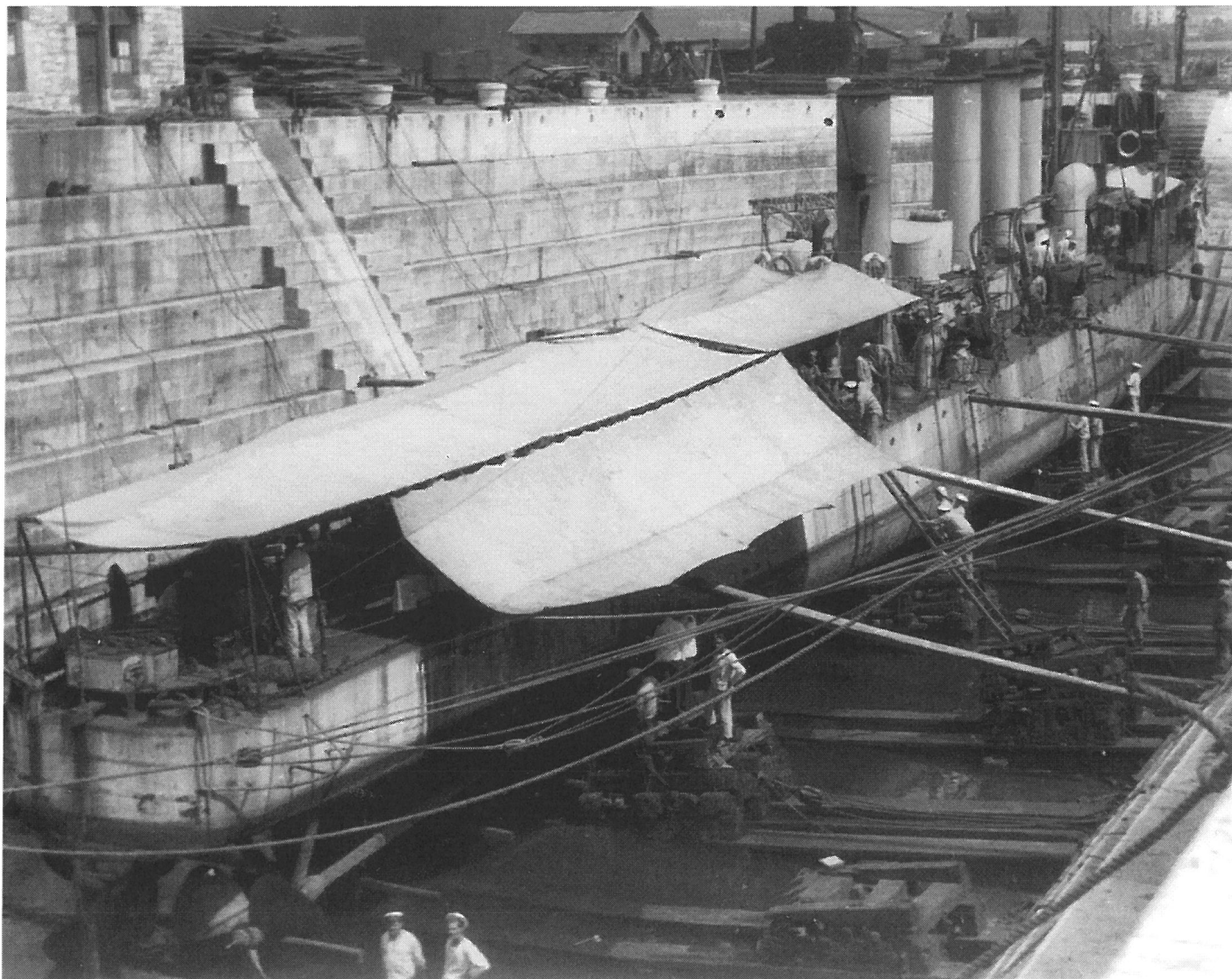
Destroyer **Pandur** moored in Poreč. (Baumgartner)



Late in January 1915, **Pandur** was sent to Pula again, to be docked in early March. She was searching for submarines again near Split on 26 March 1915, to be moved to Boka on 18 April. When she was returning to Boka from a mine sweep of the Bojana mouth on 24 April, she was shelled by Montenegrin coastal guns, but suffered no hits. On 20 May, she left Boka as an escort for the large German submarine **U 21**, and on 25 May, she was hunting – together with the torpedo boats **15** and **59 T**, one (Italian?) submarine near Cape Oštro. On 11 August, she attacked together with **Turul** and **Warasdiner** the Italian harbor Molfetta. On 29 August, she escorted to Boka the Greek steamer **Kefalonia** (or **Cephalonia**), being seized earlier by the A-H submarine **Ub. 5**, and in early October, she was patrolling between Boka and Mljet. On 5 December, she shelled the Albanian harbor Shengjin, and after her boilers were replaced and other repairs completed in Pula by the 25 March 1916, she took part at the short skirmish with Italian destroyers **Rossarol**,

²⁵ French sources are not mentioning any of their submarines operating in this area at this time.

Pepe, *Missori*, and *Nullo* near Porto Corsini on 25 May, as the A-H destroyers *Csikós*, *Scharfschütze*, *Pandur*, *Velebit*, and six torpedo boats were waiting for the A-H seaplanes after their attack on Ravenna and Porto Corsini (see under *Scharfschütze*). On 27 December 1916, *Pandur* towed the submarine *Ub. 16* from Boka to Pula, where followed an overhaul 6 February. On 21 March, *Pandur* escorted the floating dock No. III in tow from Pula to Poljud near Split. After a short stay in Split, *Pandur* was patrolling off Palagruža, returned to Pula, and was moved to Boka again on 19 March 1918.

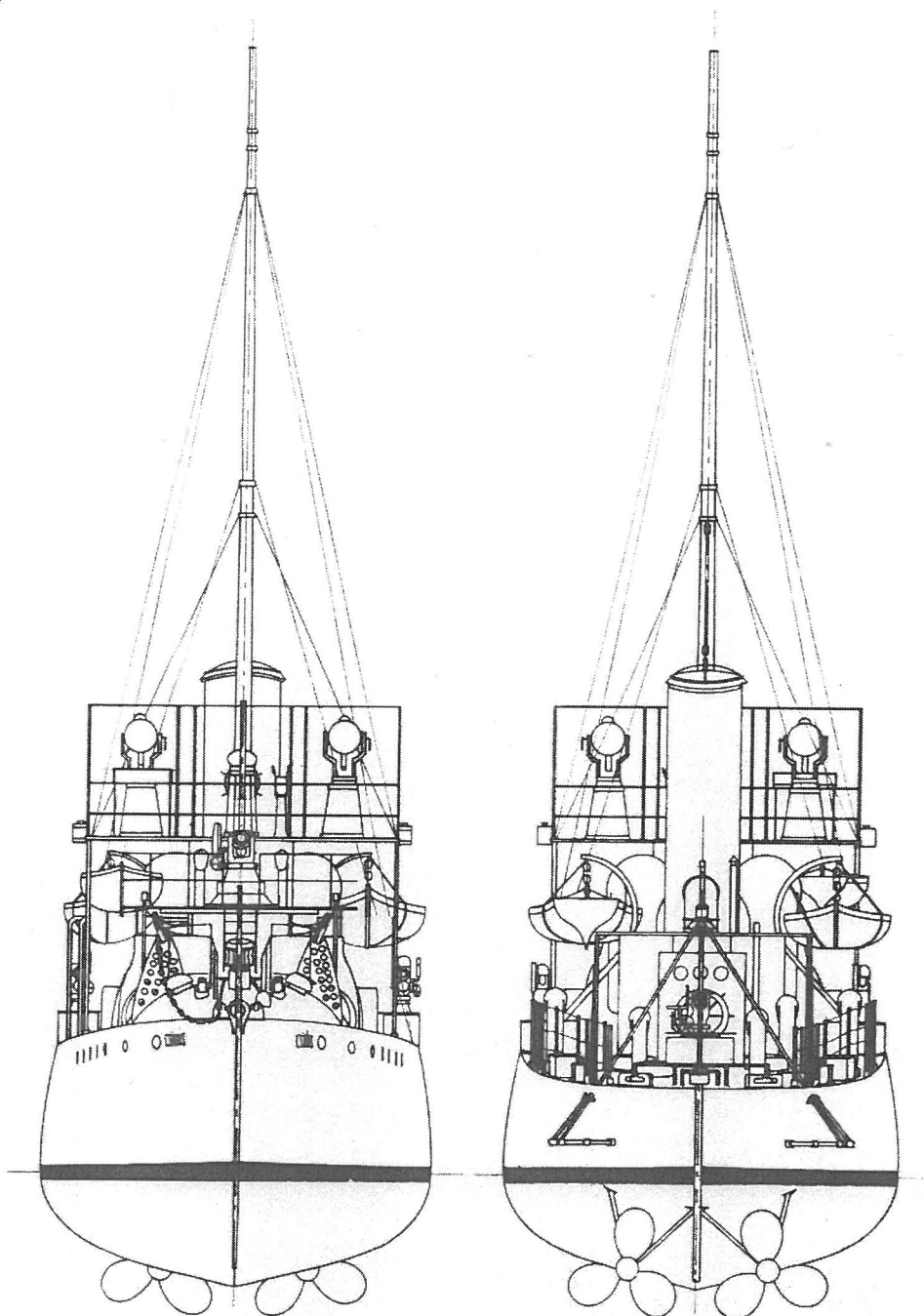


Pandur in dock in Pula. (Pawlik)

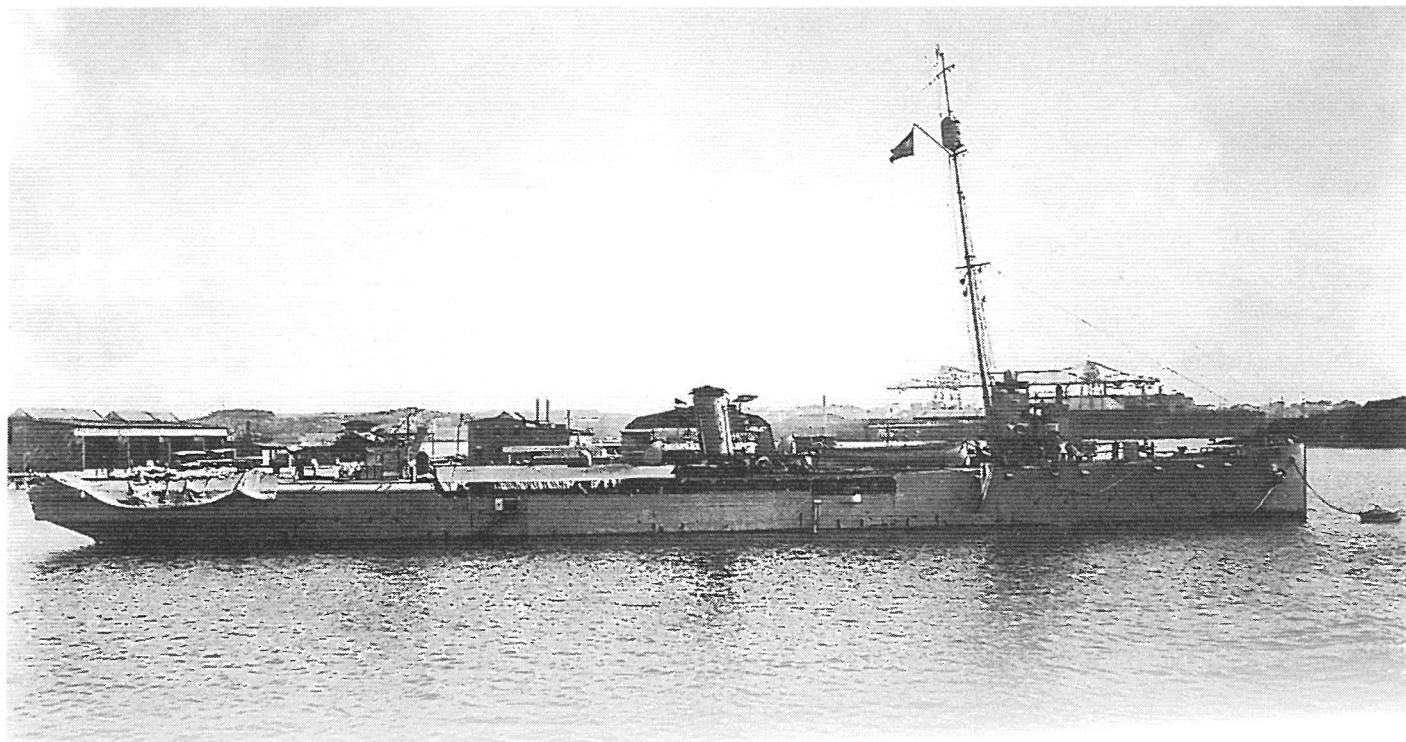
The destroyer was again patrolling off Vis on 12 April, to be docked (in Tivat) from 24 May to 3 June, and to stay later in Boka. During the planned and later cancelled raid against the Otranto Barrage in June 1918, *Pandur* was to form the Support Group **d**, together with *Huszár*, *Erzherzog Karl*, and three torpedo boats. In 1918, she was 64 times escorting steamers with troops and material to and from Albanian front, was once sweeping mines, and three times searching for submarines. Her COs in this period were KK Josef Posarelli von Mesperch, and KK Ernst Sauter. *Pandur* was stationed in Boka on 1 November 1918, hoisting the Croatian flag with other warships, but was shortly thereafter seized by the French. She was officially ceded to France in 1920, towed over Bizerte to Toulon, and scrapped there.

Soon after completion, **CSIKÓS** took part with the Squadron at a training cruise to the Levante (Eastern Mediterranean) between February and April 1910. She was disarmed for modifications and repairs, and was recommissioned on 7 August 1914, under *FK* Heinrich Huber. Early during the war, she was stationed intermittently in Šibenik and Boka kotorska, patrolling and searching for enemy submarines, around Vis on 2 November 1914, and in front Šibenik on 6 January 1915.

In early 1915, on 14 February, **Csikós** was shelling Montenegrin positions near Bar, also on 1 and 2 March, supporting the A-H torpedo boats **57 T**, **66 F**, and **67 F** that captured and sank the Montenegrin Royal Yacht **Rumija** (that was actively taking part at war operations and towed the coastal sailing ships with war material along the coast). On 18 February, **Csikós** towed the submarine **Ub. 5** to Pula. She was sent to Pula again on 23 April, and on 1/2 May 1915, she escorted from Pula to Boka the cruiser **Novara** with the German submarine **UB 8** in tow underway to the Otranto Straits. From 5 May onwards, **Csikós** was again in Pula, and took part at the A-H fleet attack against Italian coast on 24 May. She shelled the enemy coastal batteries, barracks, and the shipyard in Ancona. Afterwards **Csikós** was sweeping mines off Istria and was on 5/6 July with **Wildfang** and **Ulan** escorting the minelayer **Chamäleon** to the Po estuary.



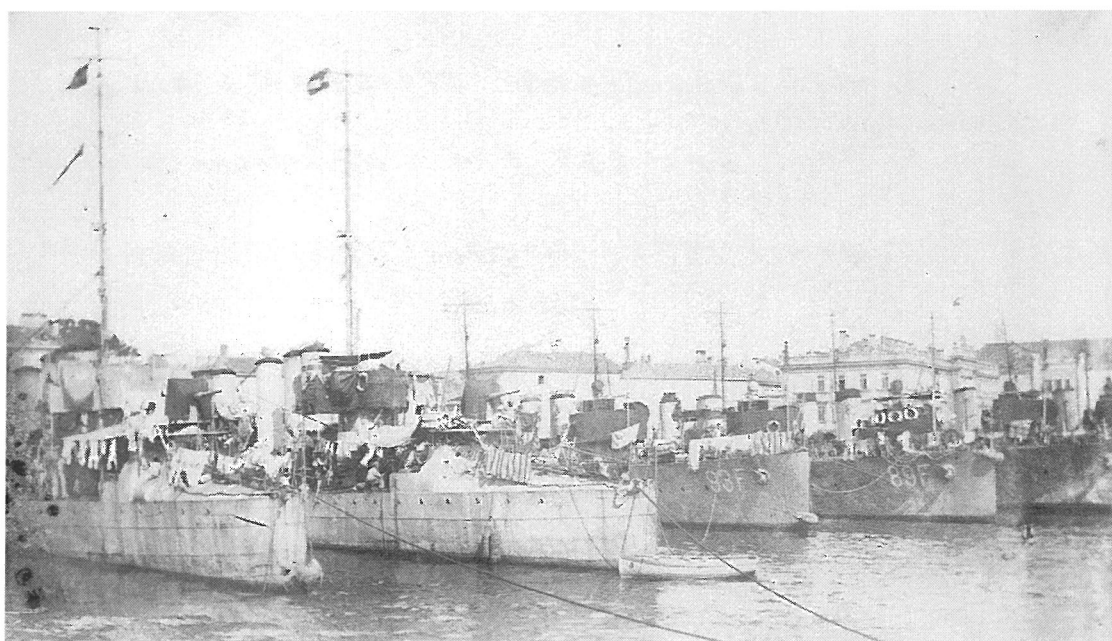
Destroyer **Csikós**, views from forward and aft. (Kovács)



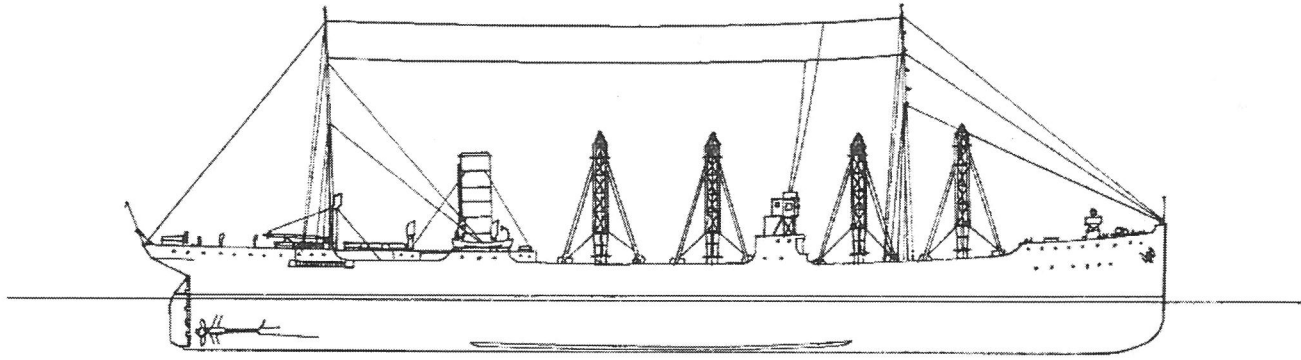
Austro-Hungarian minelayer *Chamäleon* in Pula. (Baumgartner)

In October 1915, *Csikós* was hunting an enemy submarine off Rovinj, and was later re-armed with twin torpedo tubes aft. On 8 December 1915, she was sweeping mines off Pula, and in January 1916, four of her boilers were modified for additional oil burning. The experiment was of no success, and later only two boilers were modified in this way. She was supporting A-H seaplanes returning from attacks, to rescue their crews in case of a forced watering, and she towed the crashed seaplane *L 59* to Pula on 17 January, after her crew was already captured by British submarine *B 11*. On 3 May 1916, *Csikós* was involved into the already mentioned skirmish with the Italian destroyers *Rossarol*, *Pepe*, *Missori*, and *Nullo* off Porto Corsini. In July 1916, she was sweeping mines in the Bay of Kvarnerić, and later her boilers were modified to oil firing. *Csikós* was searching for submarines in Kvarnerić in July 1916, and near Pula on 11 May 1917 (together with the torpedo boats *78 T*, *93 F*, and *96 F*), after *78 T* was unsuccessfully attacked by the British submarine *H 1* with two torpedoes. There followed a short skirmish with Italian destroyers *Animoso*, *Ardito*, *Ardente*, *Audace*, and *Abba*. On 20 March 1917, her CO was KK Roman Junowicz.

Csikós and *Streiter* with torpedo boats *93 F*, *89 F*, and a third unidentified boat. (Schrott)

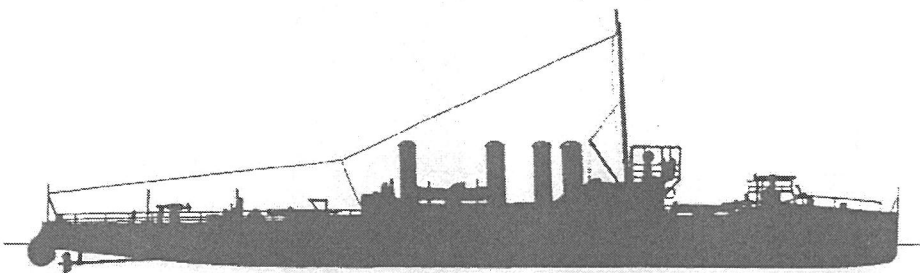


Csikós took part at the rescue of survivors from *Wildfang*, lost after hitting a mine on 4 June. She was later stationed intermittently in Pula and Boka between July and September 1917. On 17 September 1917, she was waiting near the island of Sestrice for the supply ship *Pola*, to escort her to Korčula. The auxiliary was late in answering to the recognition signal, and *Csikós* opened fire, but luckily none of 31 (!) shells hit the target. The CO of *Csikós*, KK Franz von Leonhardi, was immediately dismissed by a telegraphic order, and replaced by KK Cosimus Conte dei Medici.



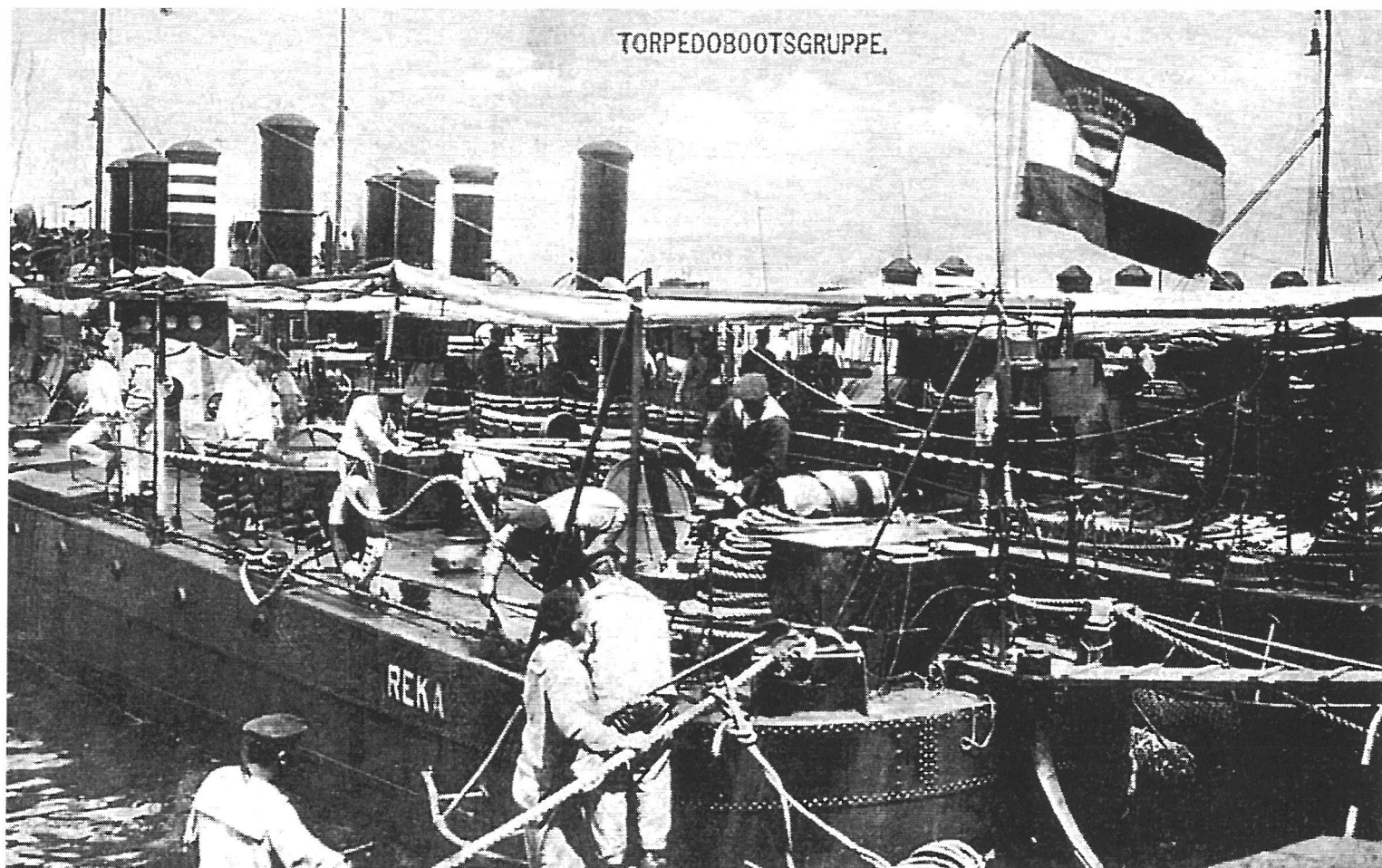
A-H coal supply ship *Pola*. (Eichardt)

On 22 September, *Csikós* was waiting off Boka for the A-H seaplanes and found near Cape of Rodon the damaged seaplane *K 206*, to tow it to the harbor. She was later patrolling and waiting for the German submarine *U 73*, to escort her to Boka on 11 October. On 4 November, she towed the downed seaplane *L 135* to Boka. On 29 November, as *Csikós* was escorting the steamer *Dalmatia* together with the torpedo boats *83*, *96*, and *97*, she was attacked in vain near the Bojana mouth by one enemy submarine, whose four torpedoes missed. She was in 1917 escorting 41 convoys and was patrolling on the line Brindisi-Valona on 11 January 1918, going afterwards to Pula, but was sent to Boka again on 2 February, to escort the battleships of the 3rd Division (of the *Erzherzog* class) to Boka, to suppress the sailors mutiny. It was still not necessary to act in force, as the mutiny was ended by the diplomatic but resolute action of some cruisers commanders in Boka. *Csikós* was afterwards stationed in Pula and Boka, and during the planned attack against the Otranto Barrage in June 1918, she was to form the Support Group *e*, together with *Uskoke*, *Erzherzog Friedrich*, and three torpedo boats. She was damaged during an air attack on Boka on 13 June 1918. On 1/2 July, she was waiting with the destroyer *Balaton* and the torpedo boats *83* and *88* for the A-H seaplanes that attacked several Italian torpedo boats shelling the A-H Army positions on the Tagliamento river. The A-H surface vessels were then attacked by Italian destroyers *Orsini*, *Stocco*, *Sirtori*, *Acerbi*, *Audace*, *La Masa*, and *Missori* that came to help their torpedo boats. *Csikós* suffered a hit in the machinery room, *Balaton* and both torpedo boats were damaged too, and on the Italian side *Stocco* and *Orsini* suffered damages as well. In 1918, *Csikós* was escorting 33 convoys, swept mines once, and was once hunting submarines. In August 1918, her CO was again KK dei Medici, replacing KK Friedrich von Arvay. As the war ended, *Csikós* was stationed in Pula and hoisted the Croatian flag on 31 October. She was soon seized by the Italians, ceded officially to Italy in 1920 and demolished afterwards.



Silhouette of the destroyer *Csikós*. (Kovács)

REKA was also named after a former steam gunboat, a veteran of the battle of Lissa in 1866. After completion, she served with the Squadron in the Eastern Mediterranean in 1910 and 1911, to operate during the First Balkan War with the 1st Torpedo Flotilla in 1912, blockading the Bojana mouth, and was later stationed in Boka and Durazzo. **Reka** was temporarily disarmed on 26 May 1913, and after being recommissioned on 7 May 1914, under KK Franz Morin, she was stationed in Šibenik since 16 September. The destroyer was patrolling off Palagruža and Vis, was moved to Pula, and again to Šibenik on 6 January 1915. As the German submarine **UB 8** was towed by the cruiser **Novara** from Pula to Boka on 1/2 May 1915, the tow was escorted by **Reka** and **Csikós**.



Reka with other two *Huszár* class destroyers and three *Kaiman* class torpedo boats. (Schrott)

Reka was not taking part at the large attack of the A-H fleet on Italian coastal cities on 24 May 1915, but on 22/23 July, she was shelling the railroad bridges on Italian coast near Tessino, together with the cruiser **Saida** and the destroyers **Csikós**, **Csepel**, **Lika** (I), **Triglav** (I), **Velebit**, and **Dinara**. After an overhaul in Pula in August 1915, **Reka** was escorting convoys, searching for mines and enemy submarines. In January and February 1916, she was escorting convoys between Šibenik and Metković. On 26 February 1916, as she was entering the Veruda Cove, she was pushed by a strong wind to the rocks and damaged her portside screw. The repairs in Pula were completed on 23 May. Her CO, KK Franz Gauss, was found responsible for the accident, and was to pay over 35 thousand crowns for repairs, but the Ministry of finances forgave him his debts. **Reka** took part at submarine hunting off Premantura on 8 June, in the Bay of Rijeka on 4 July, and near Porer on 19 July. There followed another overhaul up to 19 October. On 7 November, **Reka** escorted the steamer **Innsbruck** from Trieste to Pula, and went from Šibenik to Boka on 24 November. She escorted the

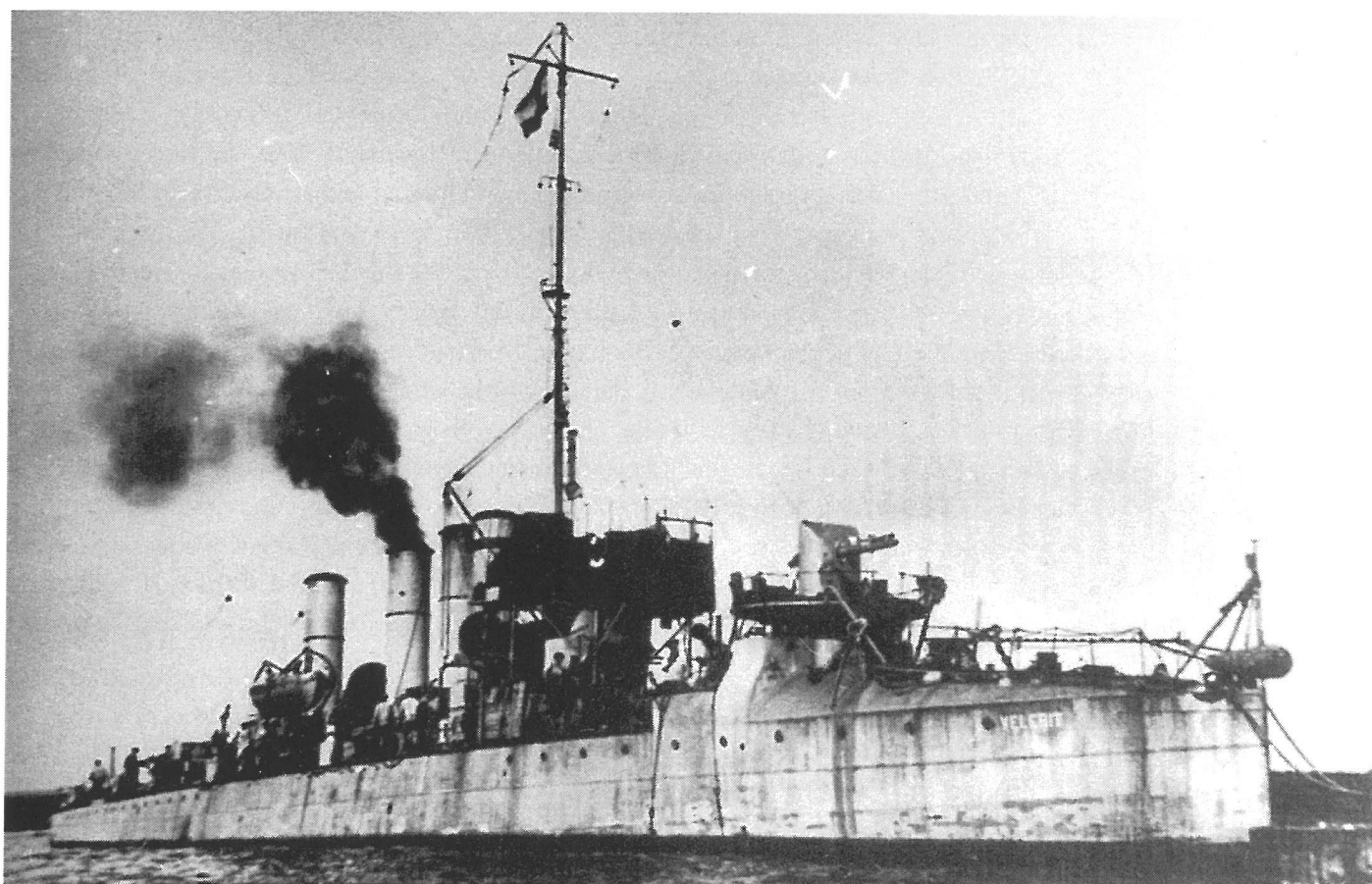
German submarine *UC 20* (a.k.a. A-H *Ub. 60*) from Đenovići to Pula on 13/14 December, with an overnight stay in Zadar. *Reka* took part at the scouting operation into the Otranto Straits on 22/23 December 1916, together with *Dinara*, *Velevit*, and *Scharfschütze*, as the group clashed with French destroyers *Commandant Rivière* and *Casque*. *Reka*'s funnels were damaged during the artillery duel, and on the French side *Casque* was damaged as well, to collide later with Italian destroyer *Abba*, and French *Boutefeu* (see under *Scharfschütze*). Between 3 and 22 February 1917, *Reka* was undergoing machinery repairs in Tivat, and her CO at this time was KK Milan Ritter von Millinković. A new sortie into the Otranto Straits (with *Uskoke*, *Streiter*, and *Warasdiner*) followed on 22 April, but *Reka* was forced to return because of a boiler malfunction, and other destroyers found no targets. *Reka* helped to put out the fire on the steamer *Senj* in the harbor of Bar on 10 May and was repaired again in Pula from 22 May to 13 August. On 14 August, she left Pula with *Streiter*, *Velevit*, *Scharfschütze*, *Dinara*, and five torpedo boats, to wait for the A-H seaplanes returning from an attack on the Italian coast and she was bombed at sea by the Italian aircraft. During October 1917 she was docked, to be sent afterwards to a scouting mission off the Italian coast. Her CO at this time was KK Friedrich Buchmayer. *Reka* escorted 10 convoys, was intermittently stationed in Mali Lošinj, Pula, and Boka, and sailed from Đenovići with *Turul*, *Pandur*, and *Huszár* on 7 May, to attack the Italian coast near Silo. The destroyers were compelled to take shelter in the harbor of Vis because of a gale and attacked their targets on 8 May (see under *Turul*). Between 3 and 6 June 1917, *Reka* was undergoing repairs of her bow in Tivat, and during 1918, she escorted ten convoys, was nine times searching for mines, twice supporting the seaplanes, and twice hunting submarines. At this time her CO was KK Walter von Hayek. At the end of the war, *Reka* was in Boka, and was officially handed over to the National Council of the S. H. S. State on 1 November, to be ceded to France as war booty in 1920 and scrapped afterwards.

VELEBIT inherited the tradition of the steam gunboat *Velevich* (!) that took part at the Battle of Lissa in 1866 too. After being completed, *Velevit* cruised with the Squadron in the Eastern Mediterranean in 1911, visiting Argostoli, Patras, Volos, Cavalla, Smyrna, Zante, and Corfu. In 1912/13 she was attached to the 1st Torpedo Flotilla, was re-armed and patrolled off the Albanian coast. *Velevit* was put into reserve on 18 October 1913, to be reactivated on 5 July 1914, shortly before the World War One, under FK Moriz Bauer. On 7 August, she sailed with the battle fleet (three battleships of the *Tegetthoff* class, three of the *Radetzky* class), the armored cruiser *Sankt Georg*, the cruiser *Admiral Spaun*, and the destroyers *Csepel*, *Scharfschütze*, *Huszár*, *Dinara*, *Wildfang*, *Csikós*, and twelve torpedo boats to receive and escort to Pula the German battlecruiser *Goeben* and the cruiser *Breslau*, returning from their attack on French harbors in North Africa. As the German *Mediterranean Division* proceeded to Constantinople instead, the A-H fleet returned to Pula. On 13 August 1914, *Velevit* took part – together with *Triglav*, *Csepel*, and *Balaton* – at the rescue of survivors and salvage of victims from the steamer *Baron Gautsch* lost off Rovinj. From the 16 September 1914, she was stationed in Šibenik, and was scouting between Palagruža and Bari, and off Visa, as an attack of the Italian volunteer *Beppino Garibaldi* Corps on the Dalmatian coast was expected. Later *Velevit* was intermittently stationed in Pula and Šibenik. During the docking time in Pula between 13 April and 6 May 1915, her single aft torpedo tube was replaced by twin tubes.

On 24 May 1915, *Velevit* took part at the attack on the Italian coastal cities; she shelled Ancona and fired also at the Italian airship *Città di Ferrara* that overflew the A-H fleet. In the inner harbor of Ancona *Velevit* torpedoed and sank one steamer (unluckily it was the German *Lemnos*!). She was laying mines off Split on 5 and 16 June and shelled Italian railroad bridges near Aso and Tessino on 23 July, together with the cruiser *Saida*, and other destroyers (see under *Reka*). After Italian landing on Palagruža, *Velevit* was part of the force (with the cruisers *Helgoland* and *Saida*, the destroyers *Tátra*, *Dinara*, *Velevit*, *Balaton*, *Orjen*, *Csepel*, *Lika*, and five torpedo boats) that attacked the Italian positions on the island on 17 August, and again on 9 September. *Velevit* was shelling Palagruža one more time on 20 September, but the Italians were evacuated from the island already on 18 August²⁶. She towed the German submarine *UC 14* (a.k.a. *Ub. 18*) from Korčula to Pula on 24 September. Together with *Reka* and *Dinara*, and the torpedo boats

²⁶ The first attack on Palagruža followed already on 28 July, being executed by the cruiser *Saida* with six destroyers of the *Tátra* class and two torpedo boats, but the landing detachment was too weak, and the A-H force was compelled to withdraw.

50 E, **51 T**, and **73 F**, *Velebit* was searching in vain for enemy submarines off Šibenik on 12 December. On 20 December 1915, she was sent to Pula, to be docked and overhauled up to 26 March 1916.



Velebit at anchor in Pula. (Baumgartner)

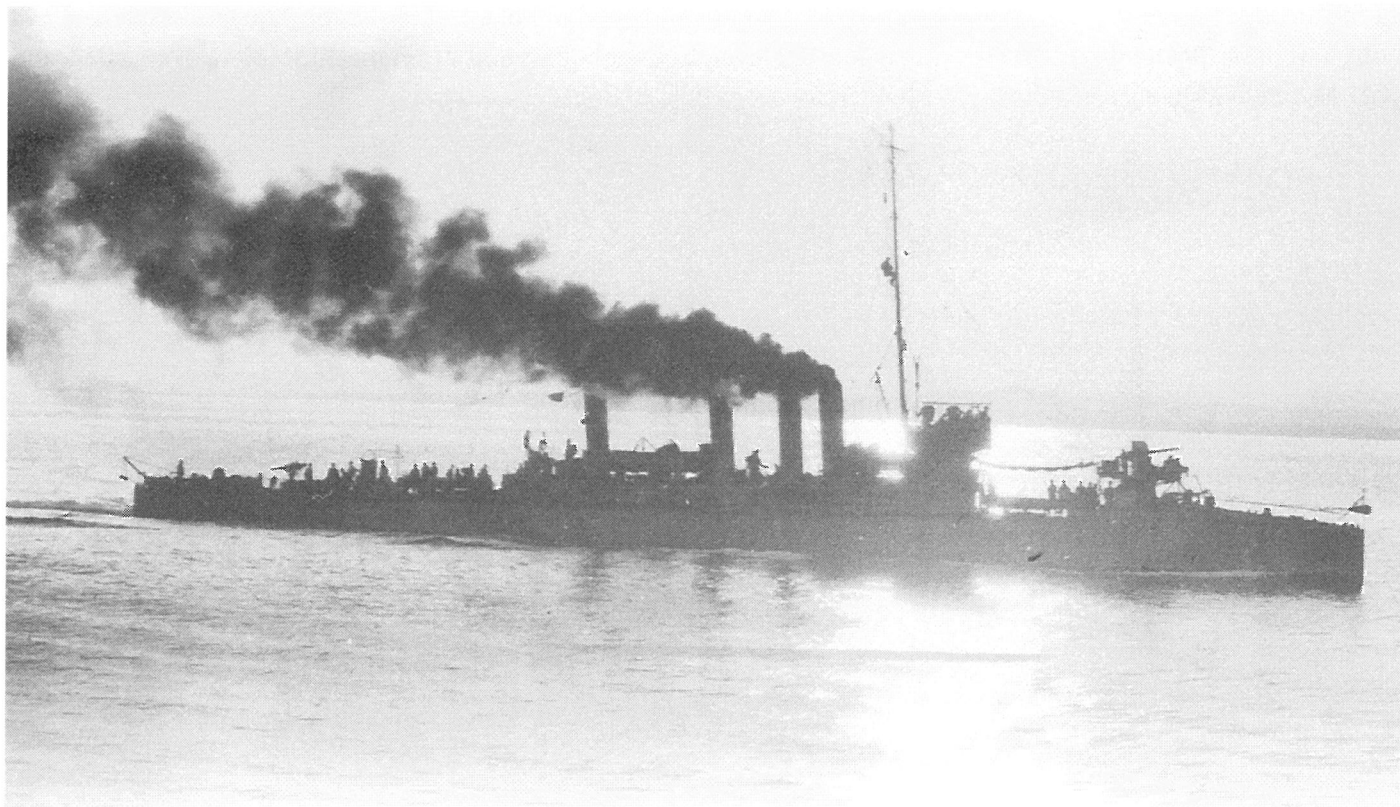
On 3 May 1916, she took part at the mentioned skirmish with the enemy destroyers off Porto Corsini, also on 23 December of the same year, during a raid into the Otranto Straits, with the already mentioned encounter with French destroyers, as *Casque* was damaged (see under *Scharfschütze*). Her CO at this time was KK Method Koch²⁷.

In 1917, *Velebit* was stationed in Boka, and was later repaired in Pula. On 30 September 1917, she took part – together with *Streiter*, *Huszár*, *Turul*, and four torpedo boats – at the skirmish with the Italian destroyers *Sparviero*, *Orsini*, *Abba*, *Acerbi*, *Audace*, *Stocco*, *Ardente*, and *Ardito* off the Po estuary. She was damaged in combat, and towed by *Streiter* back to Pula, to be repaired there. Her provisional CO was LSLt Moritz von Becker, succeeded later by KK Eduard Cossovel. *Velebit* escorted several convoys, and on 9 June 1918, she left Pula with the torpedo boats **76**, **77**, **78**, **79**, **81**, and **87**, to escort the battleships *Tegetthoff* and *Szent István*, underway to the south, to support the planned raid by the A-H cruisers against the Otranto Barrage. During this attack she was to operate with the Support Group f, together with *Tegetthoff* and four torpedo boats. Her CO was KK Stanislaus Witkowski²⁸ (in spite of being mentioned that he was CO of *Ulan* at this time). In the early morning hours of 10 June, the force was intercepted by Italian motor torpedo boats *MAS 15* and *MAS 21* – that were not sighted by the escorts – and that torpedoed *Szent István*. The battleship sank after several hours, and

²⁷ Method Koch (1874-1852, Trieste) was promoted on 31 October 1918 to Rear-Admiral of the new S. H. S. Navy and commanded for a short time with the harbor of Pula, being expelled from there with other Slav naval personnel by the Italians. He served later in the S. H. S. / Yugoslav Navy.

²⁸ Stanislaus Witkowski (1879-1935) was also artillery officer on *Novara* during the Battle of Otranto in May 1917; after the war he served in the Polish Navy and was pensioned in 1931.

the group returned to Pula with other A-H vessels. On 17 July, *Velebit* was attacked without success near Sv. Ivan na pučini off Rovinj by the Italian submarine *F 12*. She was overhauled in Pula from 27 July to the end of the war. Her CO was at this time again Moritz von Becker, in the meantime promoted to KK. In 1920, *Velebit* was officially ceded to Italy and later scrapped.

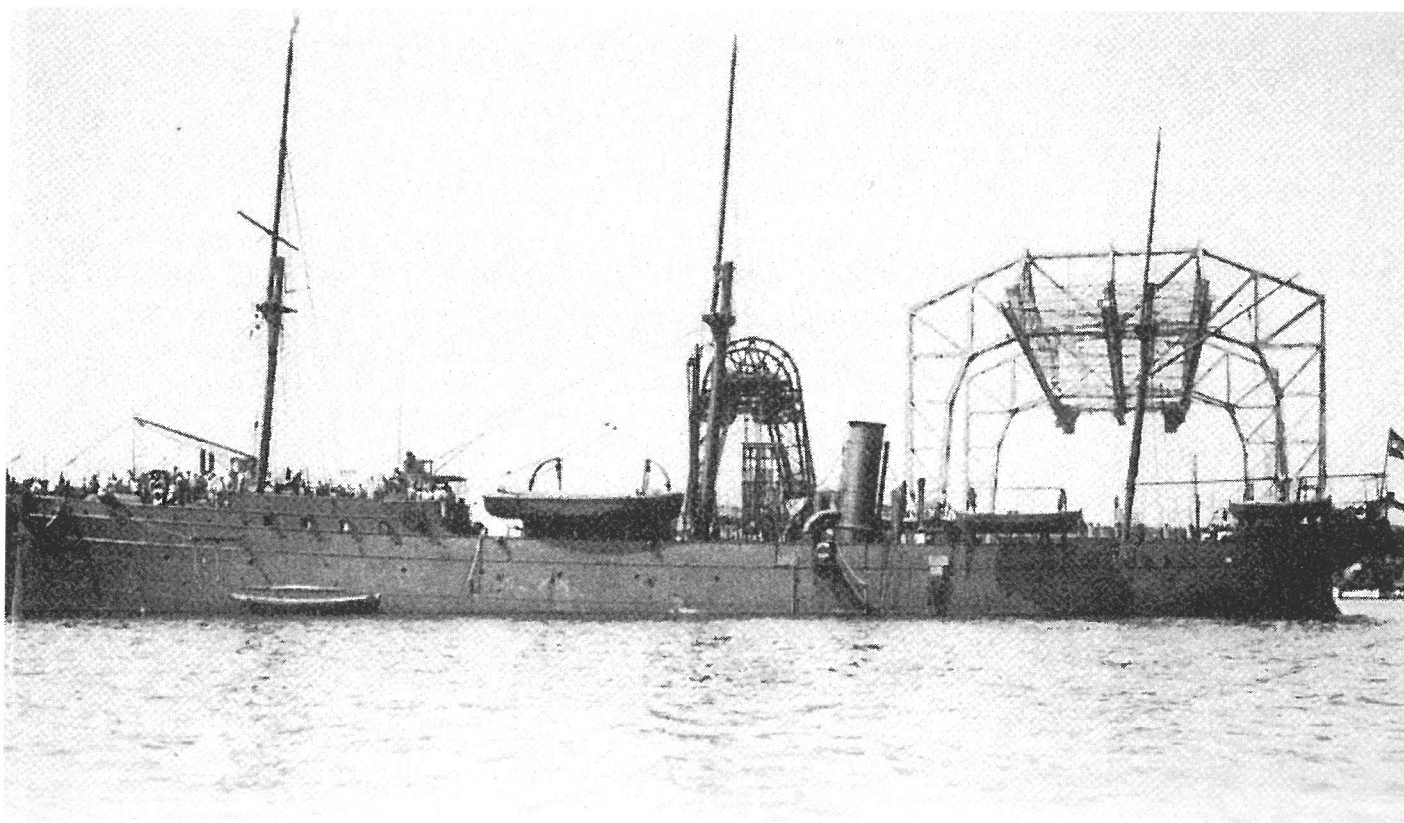


Velebit underway in the calm sea. (Baumgartner)

DINARA was commissioned on the last day of 1909 and attached to the Reserve Squadron. On 28 March 1911, she took part with other warships at the reception for the German Emperor Wilhelm II, during his visit in Pula. In late 1911, *Dinara* was in active service with the 1st Torpedo Flotilla and took part at the “fleet demonstration” against Montenegro in 1913. After receiving new guns, she was recommissioned on 1 August 1914, under command of KK Hans Ritter Gründorf von Zebegenyi. On 7 August, she sailed from Pula with other ships of the battle squadron, to receive *Goeben* and *Breslau* coming to the Adriatic, and to return to Pula again, as they went to Turkey instead. In Mid-September, *Dinara* was stationed in Šibenik and was in a scouting mission between Palagruža and Bari on 7 October. Between 12 November and 12 December, her boilers were replaced in Pula, she returned to Šibenik in January 1915, was in Pula again, and hunted an enemy submarine off Split on 26 March.

Dinara took part on 24 May 1915, together with *Velebit*, *Csikós*, and *Reka*, at the large fleet attack on Ancona, leading a group of torpedo boats that was sweeping mines as well. Luckily there were no Italian mines in front of their harbors what make the attack easier. On 23 July, *Dinara* shelled with other destroyers the Italian railroad line off San Bernardetto, and later the Grottamare railroad station. From the Italian machine-gun fire one seaman was killed and another wounded. On 6 August, *Dinara* was sweeping mines in front of Šibenik, and took part – with cruisers *Helgoland* and *Saida*, destroyers *Tátra*, *Velebit*, *Balaton*, *Orjen*, *Csepel*, *Lika* (I), and torpedo boats *74 T*, *77 T*, *78 T*, *80 T*, and *81 T* – at one of the attacks on Palagruža, occupied by the Italians already on 11 July. When returning to the base, *Dinara* was unsuccessfully attacked by a torpedo from one enemy submarine.

Between 16 September and 4 October, *Dinara* was overhauled in Pula, and on 9 November and 5 December, she was scouting off the already abandoned Palagruža. On 29 December 1915, she escorted the steamer *Kupa* as it was torpedoed by the submarine *Archimède* near Cape Ploče and stranded; *Dinara* searched afterwards for survivors. She was attacked by another submarine on 17 January 1916, as she was escorting another convoy near the island of Tijat, but the torpedo missed. From 25 April onwards, *Dinara* was stationed in Pula, and towed the damaged seaplane *L 124* to the harbor on 19 October 1916. Between 6 and 24 November, her boilers and steam machines were overhauled, and on 27 November, she escorted the repair ship *Cyclop* from Pula to Boka.



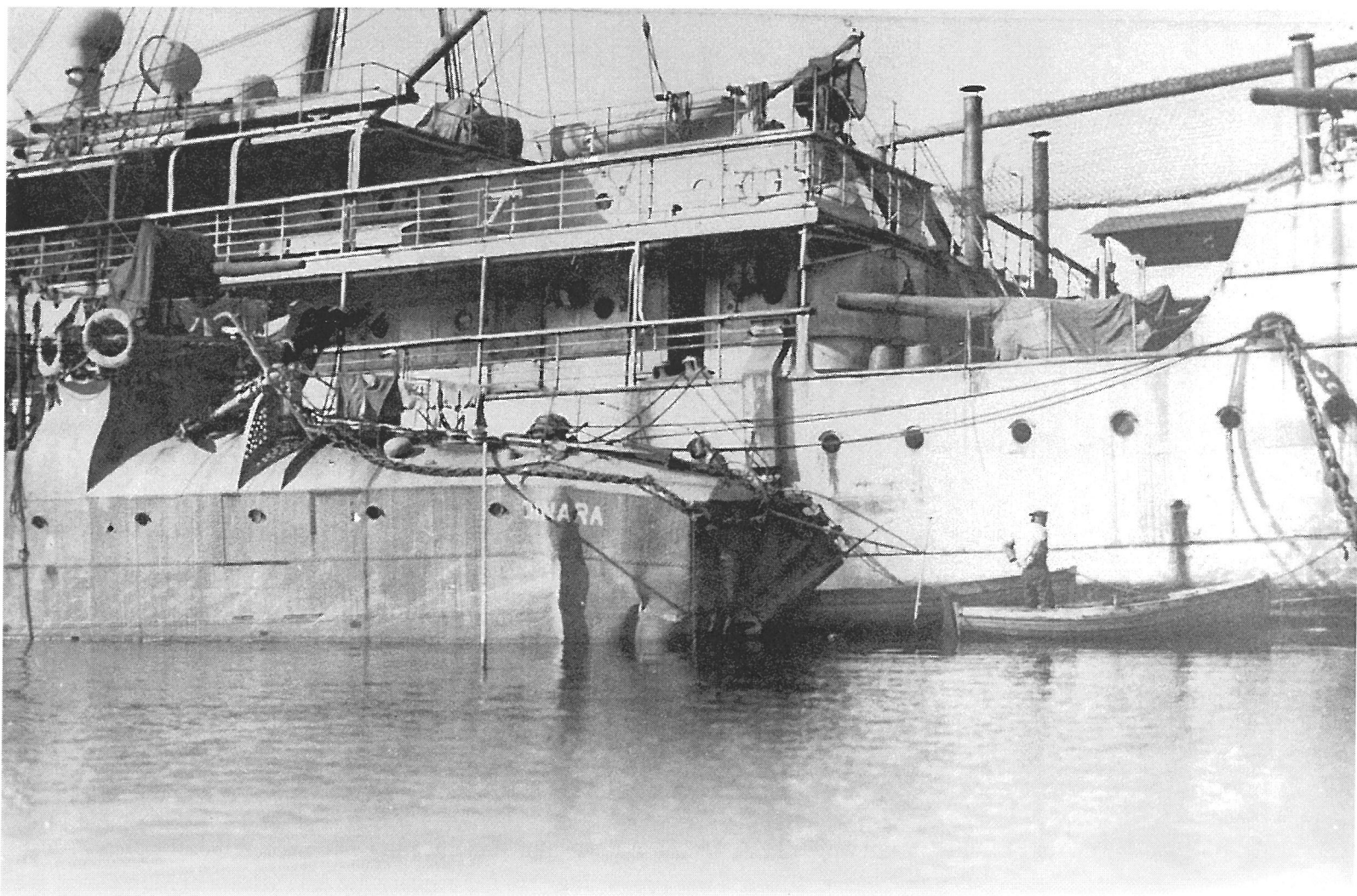
Austro-Hungarian repair ship *Cyclop* in Pula. (Schrott)

On 23 December 1916, *Dinara* took part with *Velebit*, *Reka*, and *Scharfschütze* at a raid against the Otranto Barrage, launched two torpedoes, and allegedly sank one drifter²⁹, to be damaged later by two shells during the fight against French destroyers *Casque* and *Commandant Rivière*, as one sailor from *Dinara* was killed (see under *Scharfschütze*). The CO of *Dinara* at this time was KK Virgil Sandor de Vist. During repairs, being completed on 25 February 1917, her aft boilers were refurbished for additional oil burning. From 17 April to 1 September 1917, *Dinara* was several times supporting A-H seaplanes, returning from their attacks. In November and December 1917, *Dinara* was shelling targets on Italian coast together with other destroyers and torpedo boats, being involved – together with the torpedo boat *91* – in an artillery duel with Italian armored trains Nos. 3 and 6 off Fano on 28 November.

On 8 December 1917, *Dinara* was hit by a torpedo fired from the A-H submarine (!) *Ub. 11* (LSLt Hornyak), but was only slightly damaged, as the torpedo was not armed. The CO of *Ub. 11* has allegedly not recognized the flag, but his second in command luckily forgot to arm the torpedo before launching! After being repaired by 17 January 1918,

²⁹ None of the drifters was sunk at this occasion, and only two were damaged.

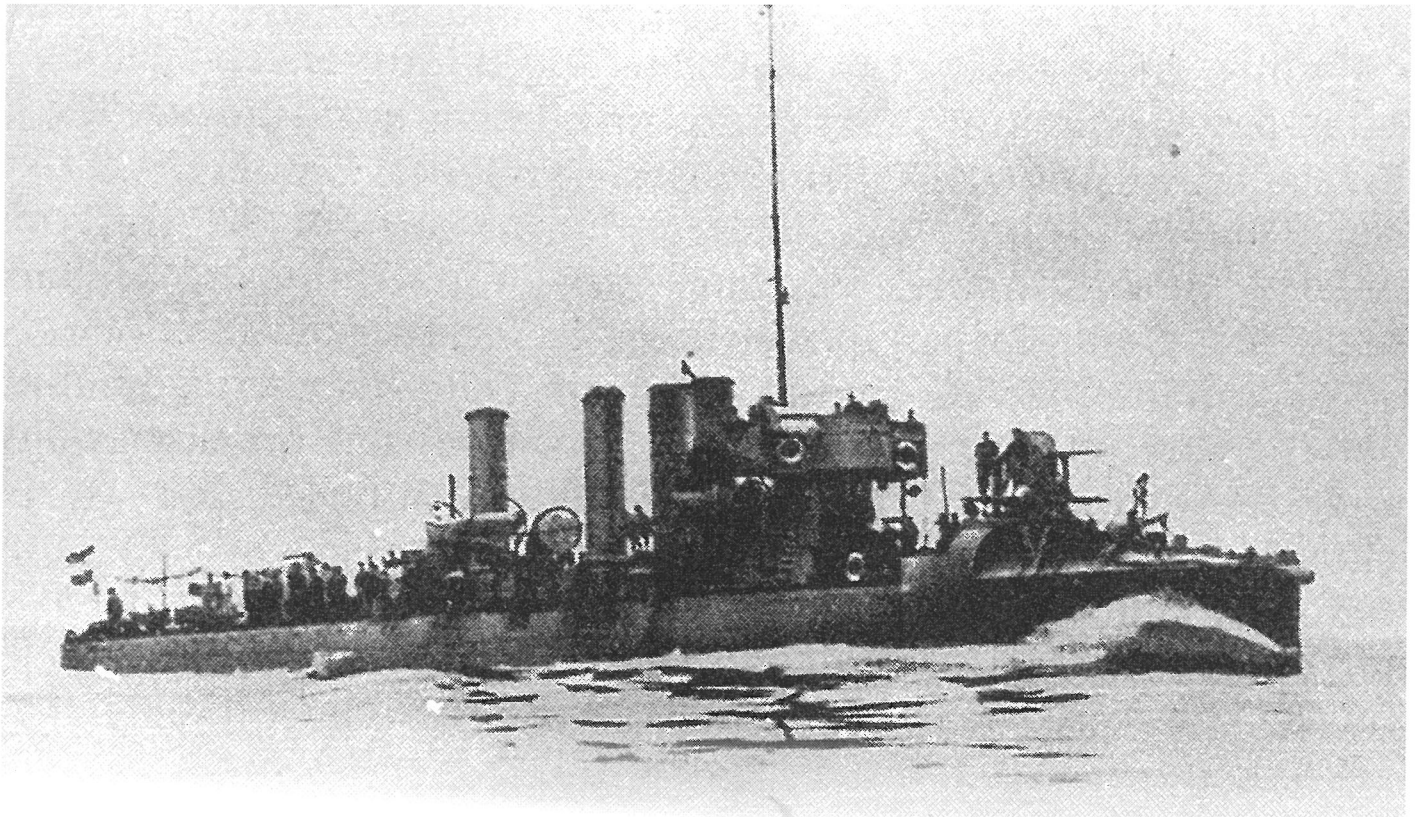
Dinara escorted three steamers to Đenovići in Boka kotorska, and was surprised there by the sailors mutiny on 1 February. Her CO, KK Karl Löwe, refused to hoist the red flag, and moved *Dinara* to a more secure anchorage (away from the mutineers' guns on the armored cruisers) on 2 February, together with *Huszár*, *Warasdiner*, *Tátra*, *Balaton*, the cruisers *Helgoland* and *Novara*, and five torpedo boats. The mutiny was over on 3 February, 800 sailors were removed from the ships, a score of older warships deleted, and some of higher officers retired. 392 sailors were accused of mutiny, four were condemned to death and executed, and others were set free when the war ended in November 1918. *Dinara* escorted some convoys to and from Durazzo, to collide with the A-H submarine *Ub. 43* in front of Boka on 17 March 1918 and to be rammed by the torpedo boat *100* as well. The torpedo boat towed the damaged destroyer to Tivat, and *Dinara* was afterwards towed to Rijeka. She was repaired in Kraljevica, and the work was completed by the Danubius shipyard in Rijeka. In August 1918, *Dinara* was commanded by KK Heinrich Pauer. She was recommissioned only in mid-September, and was staying with *Scharfschütze* in Durazzo on 2 October 1918, as this harbor was attacked by a large Entente naval force. Two destroyers and the torpedo boat *87* were successfully repelling enemy attacks, and the Entente force retired as the British cruiser *Weymouth* was torpedoed and damaged by the A-H submarine *Ub. 31*.



Damaged bow of *Dinara* after collision with the submarine *Ub. 43*. (Baumgartner)

Dinara returned to Pula on 26 October, and was to search for submarines and mines again, but for the A-H Navy the war ended on 31 October, as the fleet was handed over to the National Council of the S. H. S. State. *Dinara* hoisted the Croatian flag too but was soon seized by the Italians; in 1920, she was officially ceded to Italy and later scrapped.

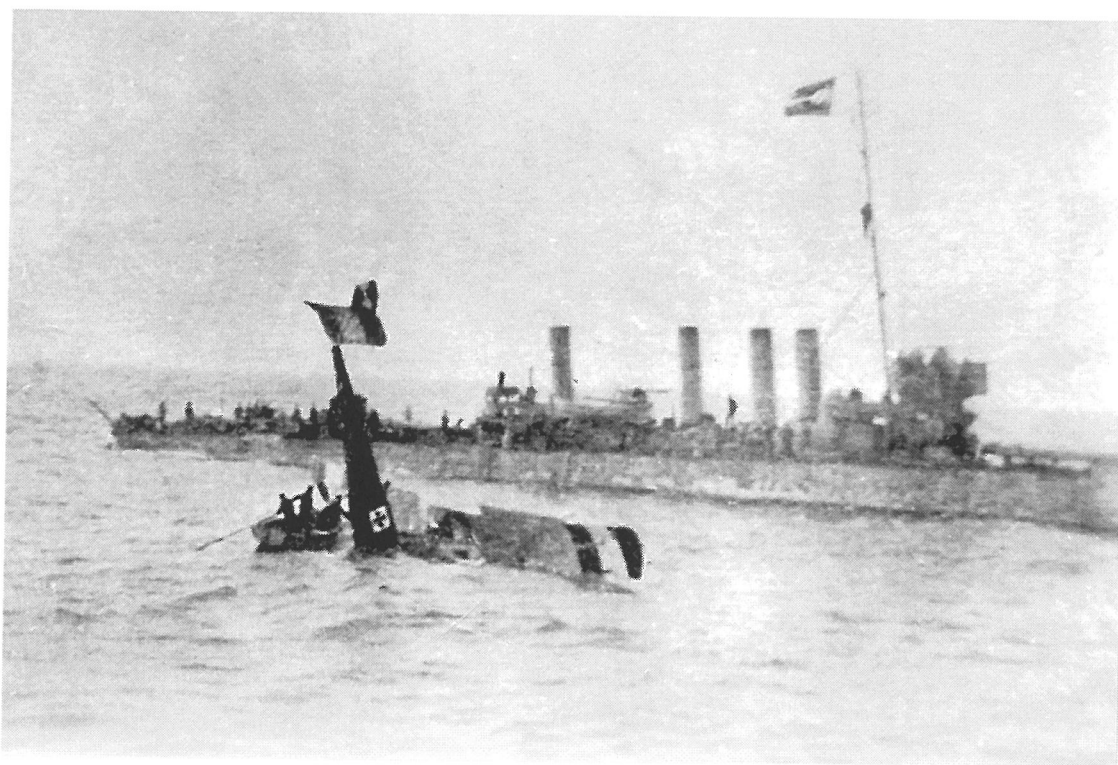
HUSZÁR (II) was commissioned on 8 February 1911, and her funnels were raised soon, as the smoke was interfering with operations on deck and the commando bridge. After this measure brought an improvement, it was carried out on other destroyers of the class as well. On 28 March 1911, *Huszár* took part at the reception for the German Emperor Wilhelm II, was put into reserve in mid-1913, and recommissioned on 20 January 1914, to operate with an international squadron along the Albanian coast. According to mobilization plans in 1914, her CO was KK Leopold Huber Edler von Scheibenhain. As the war broke out, *Huszár* was stationed in Boka, later in Pula, and then in Boka again. In late 1914, she was stationed in Šibenik, making some sorties to Vis, to be stationed later anew in Boka und Pula. On 23 May 1915, she was laying mines in front of Boka, together with *Pandur*, and the torpedo boats *59 T*, *61 T*, and *66 F*, and thus not taking part at the fleet attack on Italian coastal cities. Only after her boilers were replaced in Summer 1915, she attacked the harbor of Bari on 11 August.



Destroyer *Huszár* (II) after her funnels were raised. (Schrott)

During her stay in Boka in autumn and winter 1915, *Huszár* was shelling Montenegrin positions and the Albanian harbor of Shengjin on 5 December. In January 1916, she was supporting with her artillery the A-H seizure of Montenegro. *Huszár* was repaired in Pula between 21 July and 29 August 1915, after two of her shells exploded prematurely, to return to Boka and take part at a raid into the Otranto Straits – with *Wildfang*, *Warasdiner*, and *Turul* – on 26/27 September. No targets were sighted at this occasion. Her CO was at this time KK Alois Ulbing. *Huszár* returned later to Pula and was stationed on Lošinj in January 1917.

In early 1917, *Huszár* was commanded by KK Albert Peter. On 29/30 September 1917, she took part – together with *Turul*, *Velebit*, *Streiter*, and the torpedo boats – at the already mentioned skirmish with the Italian destroyers *Sparviero*, *Orsini*, *Abba*, *Acerbi*, *Audace*, *Stocco*, *Ardente*, and *Ardito* off the Po estuary. Her wireless aerials were damaged, and her battle ensign perforated by enemy fire. Her CO at this time was KK Georg Ritter von Wolff. On 19 November, *Huszár* was on a scouting mission along the Italian coast, and on 24 November, she salvaged the engine and rescued the crew of the downed seaplane *K 190*, to sink the plane afterwards (about ten miles from Italian coast). On 28 November, she shelled an Italian freight train near Fano. Afterwards she was stationed in Boka and was escorting convoys and searching for mines.

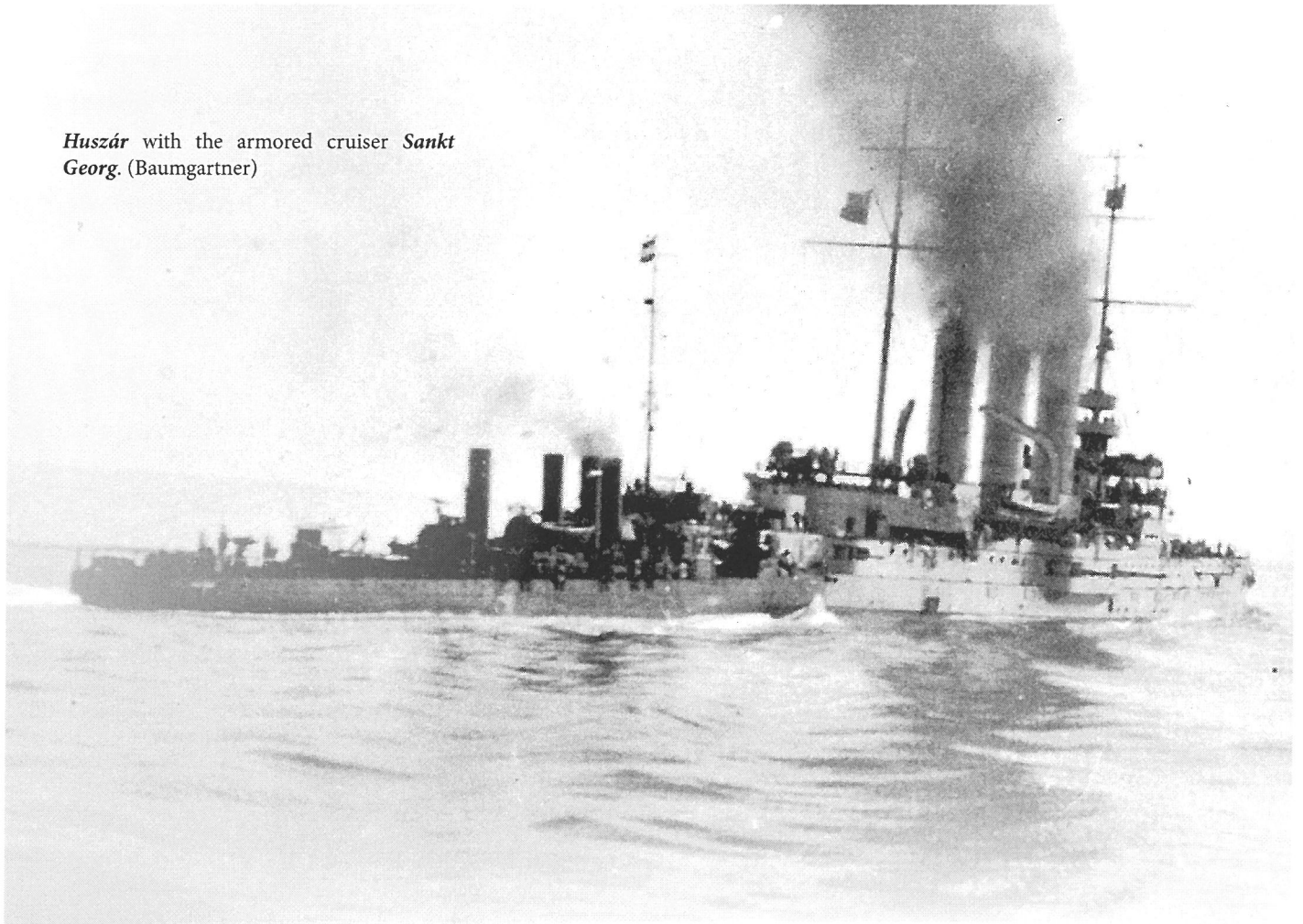


Huszár with the seaplane *K 190* near Ancona on 24 November 1917. (Selinger)

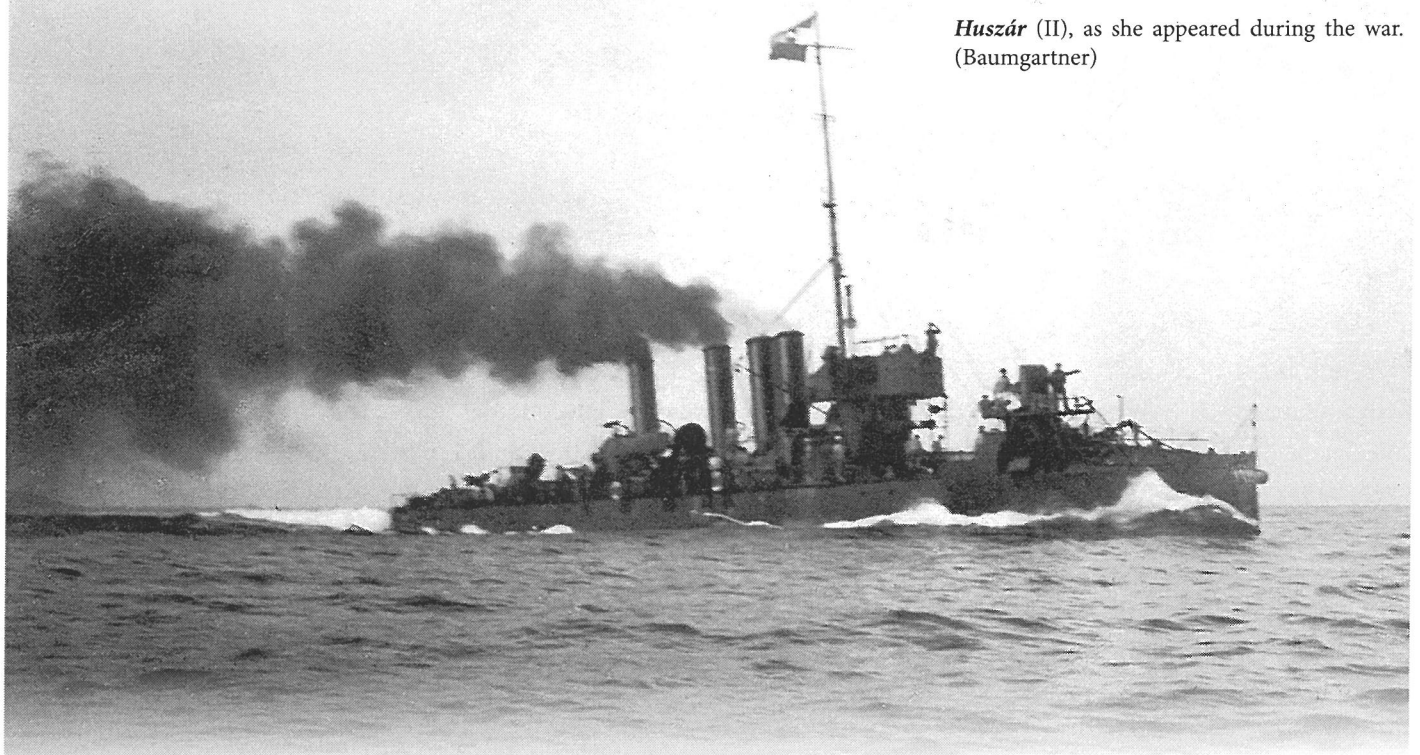
On 1 February 1918, *Huszár* was staying in Boka, as the sailors mutiny erupted there, but was not raising the red flag, and she moved later with *Novara*, *Helgoland*, *Dinara*, *Warasdiner*, *Tátra*, *Balaton*, and five torpedo boats to a secure inner anchorage in the Bay of Morinje, to leave the vicinity of the guns on the rebellious armored cruisers *Sankt Georg* and *Kaiser Karl VI*.

The mutiny ended almost on its own on 3 February, red flags were lowered, and several mutiny leaders flew with a seaplane to Italy. About 800 “untrustworthy” sailors were landed, 392 jailed, four of the leaders were executed, and the process against the others was still not over as the war ended. Finally all were set free. Since 7 May 1918, *Huszár* was commanded by KK Oskar Dolezal, and his second in command was *LSLt* Hans Sokol, later a well-known Austrian naval historian and author. On 10 June, *Huszár* was to form – together with *Pandur*, the battleship *Erzherzog Karl*, and three torpedo boats – the Support Group d during the cancelled attack against the Otranto Barrage. She returned to Pula on 4 August 1918, and during 1918, she was escorting 48 convoys, was three times sweeping mines, and once supporting the seaplanes. She was in Pula, as the fleet was handed over to the National Council of the S. H. S. State, but Pula was soon occupied by the Italians who seized almost all warships. *Huszár* was officially ceded to Italy in 1920 and scrapped soon.

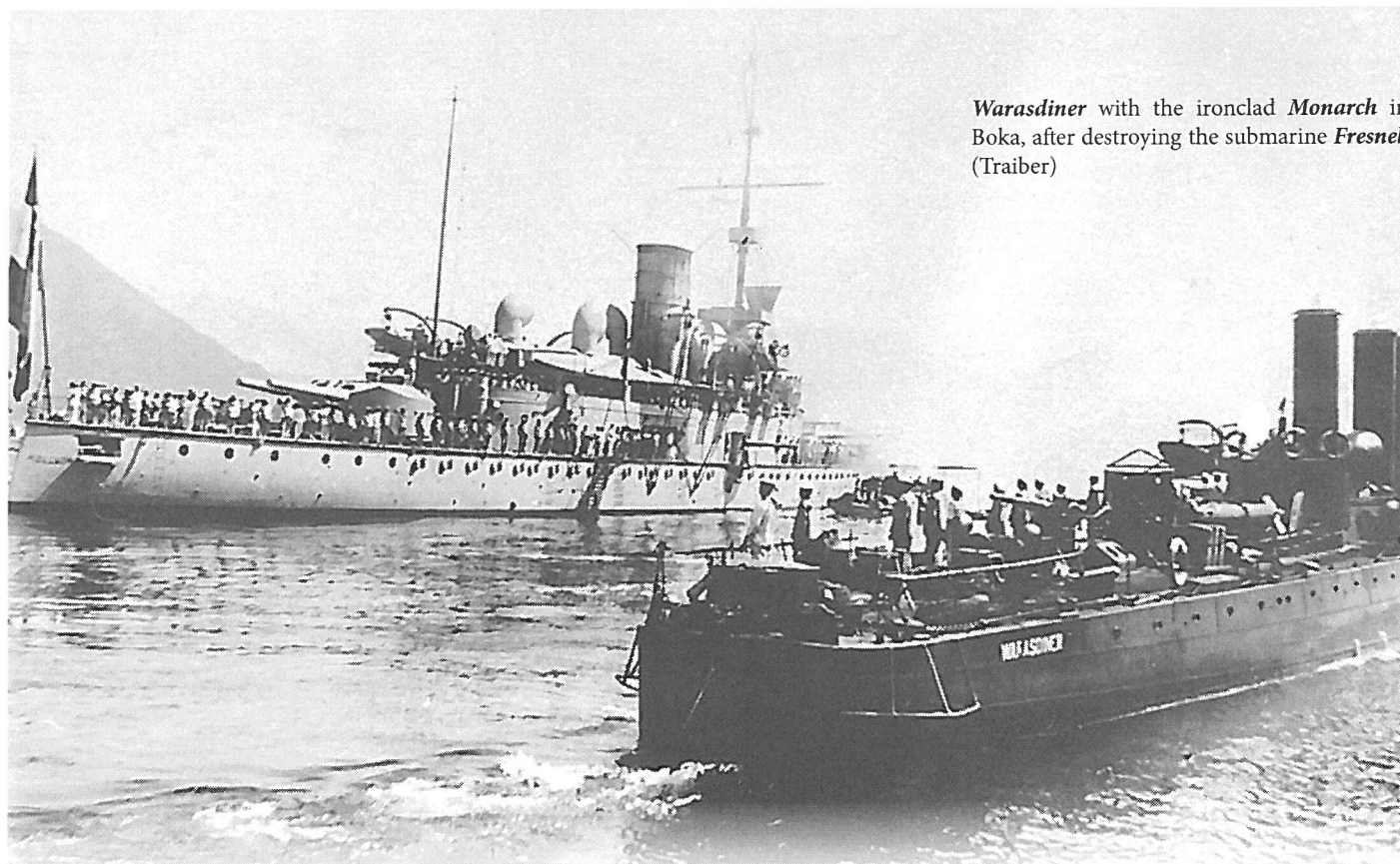
Huszár with the armored cruiser *Sankt Georg*. (Baumgartner)



Huszár (II), as she appeared during the war.
(Baumgartner)

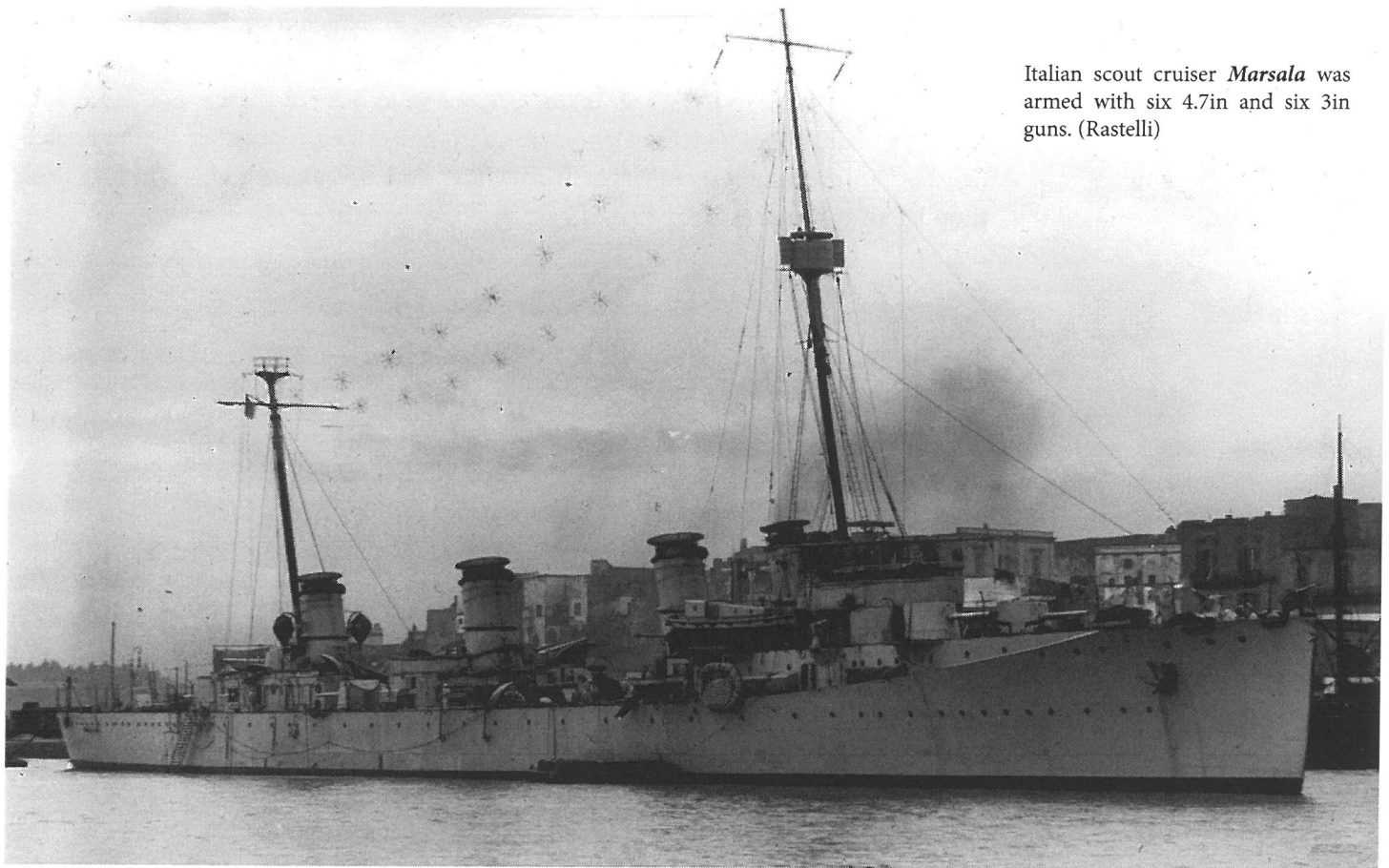


After being commissioned, **WARASDINER** served with the 2nd Torpedo Flotilla, initially under KK Maximilian von Burstyn, and later under KK Adolf Potočník. Already on 19 September, she was sent to a scouting mission, and was patrolling with the cruiser **Helgoland** and the 1st Flotilla off Šibenik on 20 September. The reason was the announced landing of the Italian volunteer corps **Beppino Garibaldi** on the Dalmatian coast, in fact a ruse launched by the French, to distract from operations of their fleet in the Southern Adriatic. **Warasdiner** and **Helgoland** sighted in fact some French warships off Vis, but they too far away for an attack.



Warasdiner with the ironclad **Monarch** in Boka, after destroying the submarine **Fresnel**. (Traiber)

On 22 September, **Warasdiner** was sent with **Turul** to Boka kotorska, arriving at Gruž on 4 October, and was sent on 5 October – together with **Huszár** and **Turul** – to patrol in the Drim Bay. As three destroyers were returning to Pula, **Warasdiner** was heavily damaged by a gale (bora) in the Kvarner Bay, and was sent to Pula for repairs, lasting until 19 October. Since 24 November, **Warasdiner** was stationed in Šibenik again, to protect maritime communications on the exposed part of the coast near Cape Ploče. During winter 1914/15, she was sweeping mines torn from their moorings by winter storms. Since 1 April, she was stationed in Boka, and on 24 April, she was searching for mines off the Bojana mouth and shelling Montenegrin batteries off Bar with **Pandur** and the torpedo boats **59 T**, **61 T**, **65 F**, **66 F**, and **71 F**. On 8 May, she was sent to a reconnaissance mission to Palagruža. On 23 May, one day before the large attack of the A-H battle fleet on the Italian coastal cities, **Warasdiner** was towing the small German submarine **UB 3** to the Otranto Straits, to conserve fuel for the voyage to Turkey. The submarine carried the provisional A-H designation **Ub. 9**, but never reached Turkish waters, being lost underway to Smyrna without trace, probably because of a technical defect or an accident. **Warasdiner** was thus not able to take part at the A-H fleet attack on Ancona, but her CO suggested to attack the oil terminal in Monopoli. This action was carried out on 19 June, but as the oil tanks were empty, they went not up in flames after being hit. On her way back, **Warasdiner** was pursued by the Italian cruiser **Marsala** and four French destroyers but being faster she could escape.



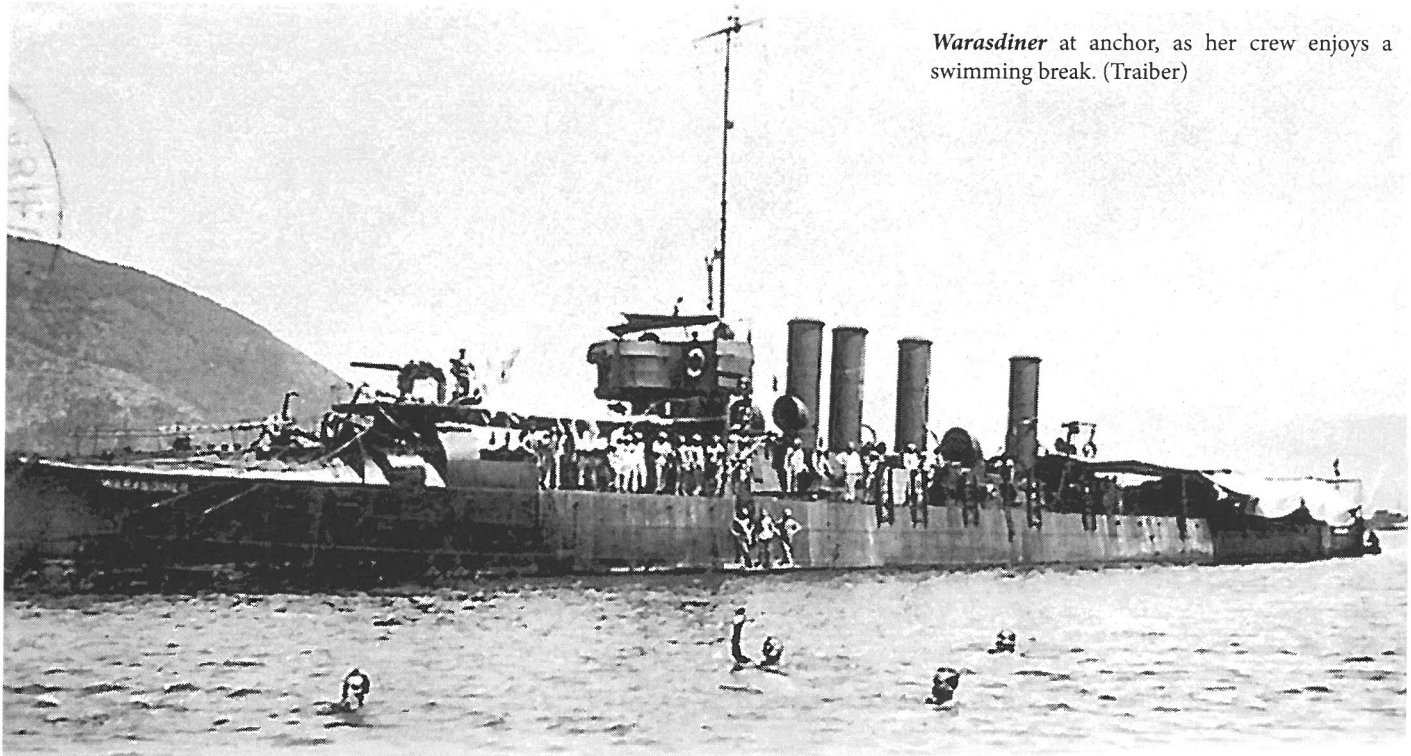
Italian scout cruiser *Marsala* was armed with six 4.7in and six 3in guns. (Rastelli)

Still in June, *Warasdiner* escorted A-H submarine *Ub. 4* to the Southern Adriatic, and on 22 July, the German minelaying submarine *UC 12* (a.k.a. A-H *Ub. 24*), underway to her first mission in the Mediterranean³⁰. On 11 August 1915, *Warasdiner* shelled with *Turul* and *Pandur* the Italian harbor Molfetta, and *Huszár* was shelling Bari, and all four ships returned undisturbed to Đenovići. She was later waiting for the German fleet submarines *U 39* (on 15 September) and *U 34* (on 17 September) coming over the North Sea, Atlantic, and Mediterranean to the Adriatic, to be led by *Warasdiner* through the A-H minefields to Boka. In late September and early October, the destroyer was with other warships escorting the floating dock No. III from Pula to Boka, and on 21 October, together with *Huszár* and *Pandur*, she landed some Albanian agents at the mouth of the river Mat.

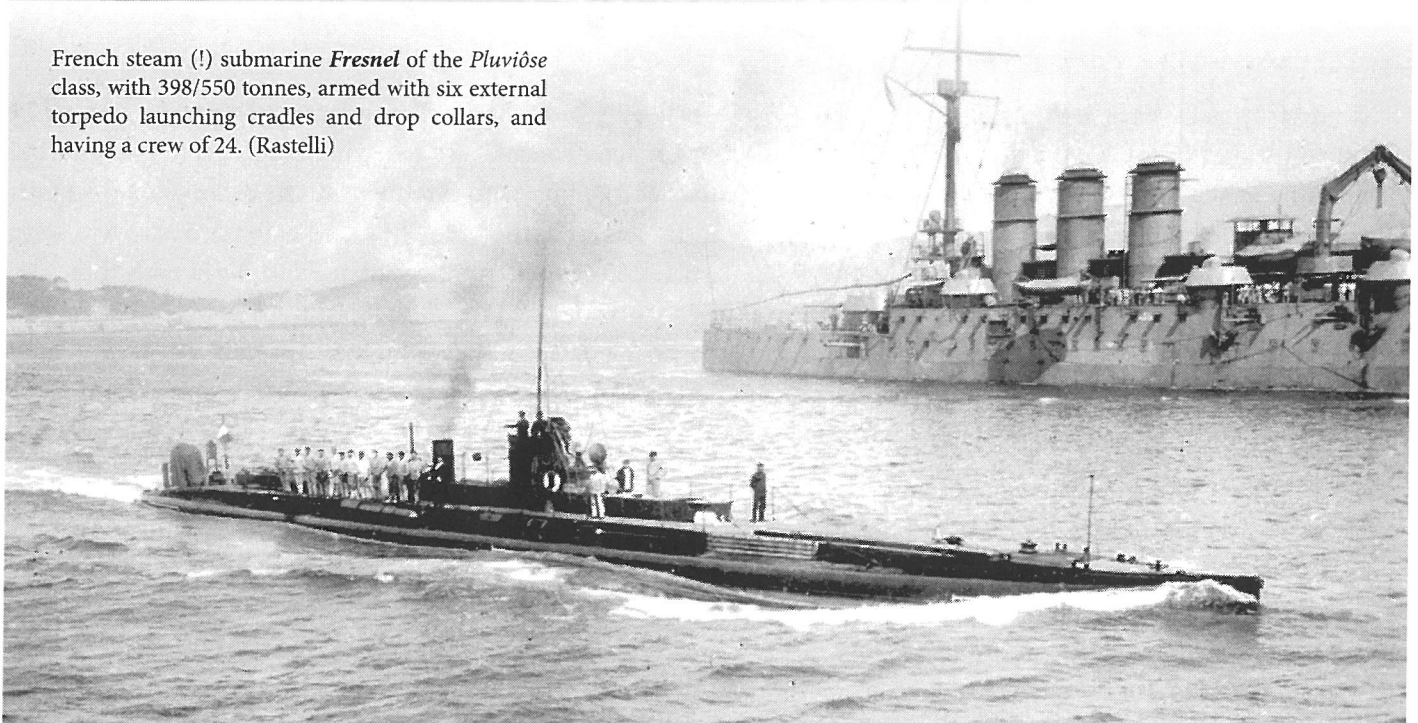
The *Warasdiner*'s biggest success was the destruction of the French submarine *Fresnel* (LV René Stanislas Jouen), stranded on a sand bank in the Bojana estuary on 5 December 1915. At the same time, A-H cruiser *Novara* was attacking with *Huszár*, *Pandur*, and the torpedo boats *66 F* and *67 F* the harbor of Shengjin, sinking there two Italian steamers and several coastal sailing vessels. *Turul* and *Warasdiner* remained on patrol near the Bojana mouth, as the A-H seaplane *L 58* sighted the stranded submarine and attacked her with machine-gun fire. *Warasdiner* appeared on scene at 0845 hours, coming to a distance of 1,000 meters. The French submarine CO sent a dinghy with five crew members to the shore, to ask Montenegrins for help, and the CO of *Warasdiner* sent his boat with an ultimatum for surrender. The French crew opened rifle fire at the A-H boat, and *Warasdiner* answered with her artillery. The French dinghy was sunk, with one seaman killed, and *Warasdiner* neared to a distance of 500 meters, shelling the French who were entrenched on the sand bank. Soon the rest of A-H naval force arrived to join the artillery barrage, and the French

³⁰ *UC 12* served with the German Submarine Half-Flotilla in Pula from 27 June 1915 to 16 March 1916, as she sunk by an explosion of her own mine off Taranto. After being raised by the Italians, it was revealed that she used a false identity what led to a serious diplomatic scandal.

crew was forced to surrender. It was tried to tow *Fresnel*, but with no avail, as she was laying fast on the sand bank and was heavily damaged by the artillery fire. The A-H vessels came under fire from the hidden Montenegrin coastal guns, and they left the battlefield. British cruiser *Weymouth* and the Italian *Marsala* were sent out from Brindisi with four destroyers to intercept the A-H force but arrived too late. One French detachment came later to the stranded submarine and reported that *Fresnel* could not be salvaged. Thus the submarine disappeared in sand³¹.

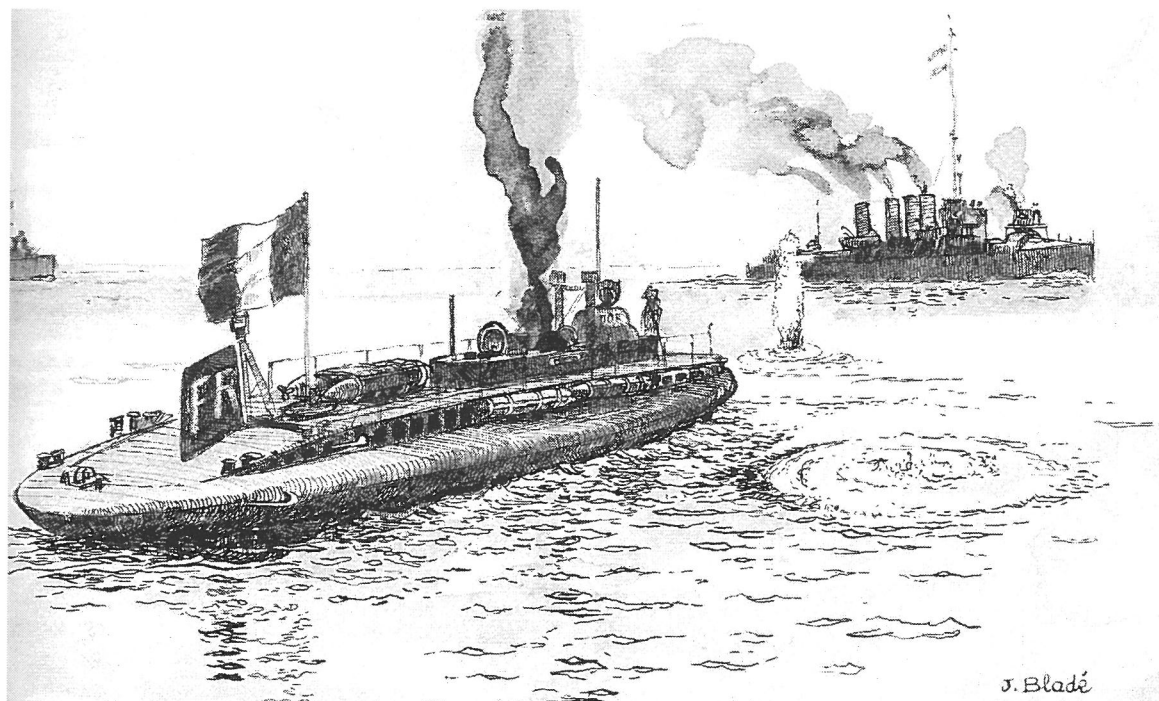


Warasdiner at anchor, as her crew enjoys a swimming break. (Traiber)



French steam (!) submarine *Fresnel* of the *Pluviôse* class, with 398/550 tonnes, armed with six external torpedo launching cradles and drop collars, and having a crew of 24. (Rastelli)

³¹ The wreck of *Fresnel* was discovered anew in early 2021.



Destruction of the stranded *Fresnel*, as seen from the French side. (Bladé, via Garrier)

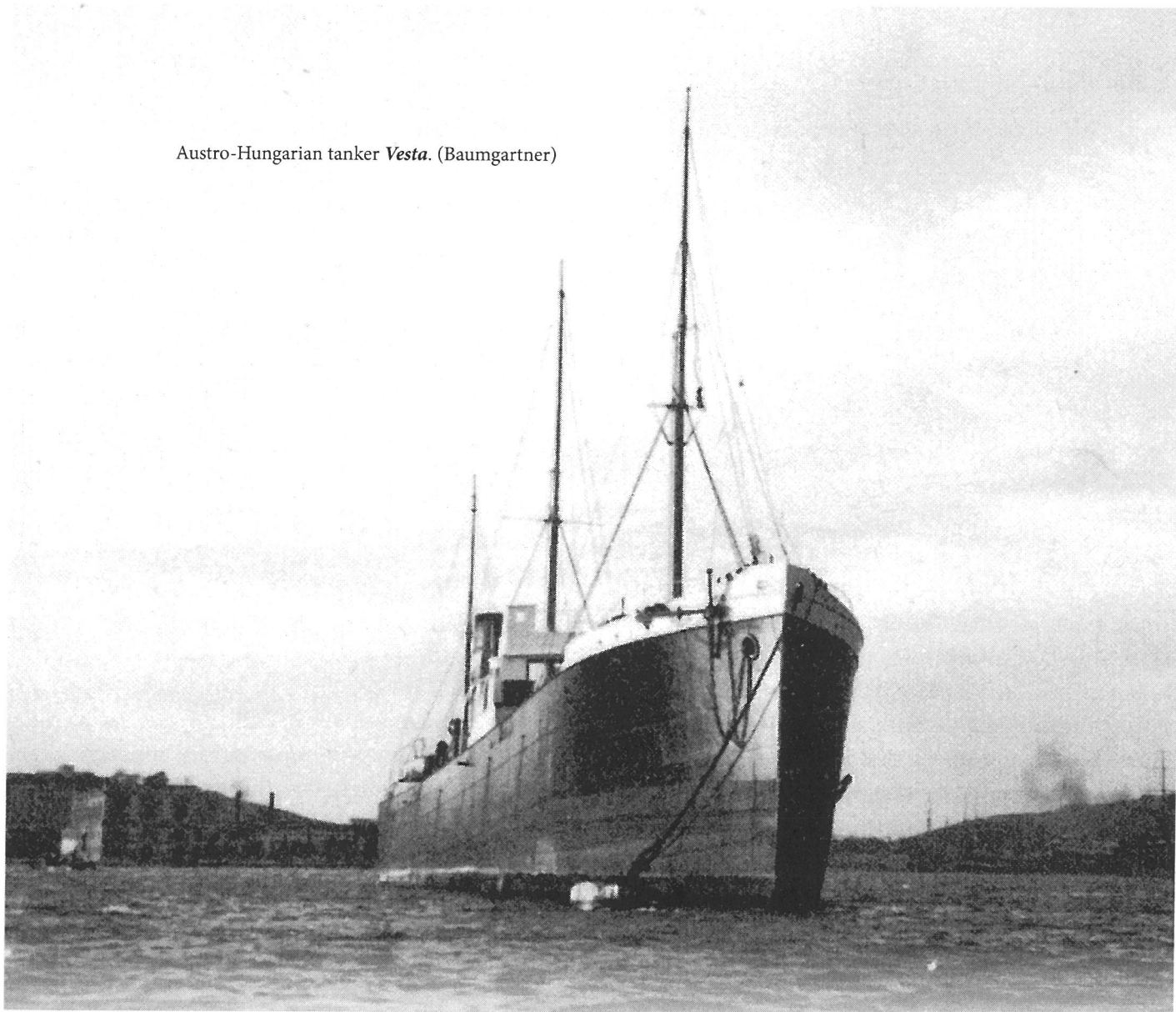
During the Austro-Hungarian offensive against Montenegro in January 1916, *Warasdiner* and *Huszár* were together with four TBs (52 T, 65 F, 67 F, and 73 F) covering the cruiser *Aspern*, supporting from the Traste bay south of Boka the A-H troops with her artillery. On 24 February, *Warasdiner*, *Huszár*, *Turul*, *Wildfang*, 77 T, 78 T 83 F, and 88 F formed the force that was to attack Durazzo together with the cruiser *Helgoland*, but the action was cancelled because of a gale. *Warasdiner* returned later to the middle Adriatic, and as the steamer *Zagreb* was attacked unsuccessfully by a torpedo near Cape Ploče on 28 February, *Warasdiner* was near, escorting the auxiliary *Steamer XX* (ex-*Fram*) and the submarine *Ub. 11* from Boka to Split. She was sent to hunt for the attacker, the French submarine *Archimède* (LV Deville). The sub attacked *Warasdiner* too, but both torpedoes missed.

The destroyer returned to Pula on 1 March, was still part of the 2nd Torpedo Flotilla, and arrived at Boka again on 28 March. On 4 May, she took part at the salvage of the destroyer *Csepel*, damaged by a torpedo fired by French submarine *Bernouilli* and she searched later without success for the attacker together with *Balaton*. On the evening of 1 August, *Warasdiner* sailed out with *Wildfang* from Boka to attack the Italian harbor Molfetta, and as both destroyers were returning, they were attacked on 2 August by the British cruiser *Liverpool* and the Italian *Nino Bixio* with three destroyers and six torpedo boats (as described under *Wildfang*). There followed the unsuccessful sortie on 28/29 August, as *Warasdiner*, *Wildfang*, *Turul*, *Orjen*, *Balaton*, and four torpedo boats were covering the cruisers *Sankt Georg*, *Karl VI*, *Novara*, and *Helgoland*, trying to lure the enemy into a trap formed by the A-H submarines (see under *Wildfang*).

On 26/27 September 1916, *Warasdiner* sortied out with *Huszár*, *Turul*, and *Wildfang* to attack enemy maritime traffic between Valona and Brindisi, but no targets were found. She returned to Pula on 19 October, and was escorting convoys and sweeping mines until 1 December 1916, to be afterwards overhauled, with works completed on 14 January 1917. She returned to Đenovići on 6 February and sortied out to support A-H seaplanes on 12 February. On the same evening, she sailed out again, to help the steamer *Szent László*, stranded of the Bojana estuary, but the steamer came free alone, and was escorted by *Warasdiner* to Boka. On 18 February, *Warasdiner* received the German submarine *U 38*, returning from a sortie in the Mediterranean. From 28 to 30 March, *Warasdiner* assisted – together with the repair ship *Cyclop*, the steamer *Kálmán Király*, destroyers *Uskoke* and *Reka*, three torpedo boats, the *Tender 200*, and three oil lighters - the salvage of the tanker *Vesta*, stranded on the Ruda islet in the Koločep Channel. After 415 tonnes of oil

were pumped from the tanker to the lighters, and 590 tonnes pumped overboard (!), *Vesta* came free and was towed to Gruž. On 23/24 April, *Warasdiner* went with *Streiter* and *Uskoke* to search for enemy transport ships in the Otranto Straits, but no targets were found.

Austro-Hungarian tanker *Vesta*. (Baumgartner)



On 14/15 May 1917, three A-H light cruisers – *Novara*, *Helgoland*, and *Saida*, under LSKpt Miklós Horthy – successfully attacked the vessels of the Otranto Barrage that tried to prevent the passage of the German and A-H submarines to and from the Mediterranean³². During retreat, they were pursued by strong Entente naval forces, including British cruisers *Bristol* and *Dartmouth*, Italian *Marsala*, the flotilla leader *Mirabello*, and numerous Italian and French destroyers. *Warasdiner* sortied out to help, together with other A-H warships (the armored cruiser *Sankt Georg*, the ironclad *Budapest*, the destroyer *Tátra*, and seven torpedo boats). *Novara* was damaged during the battle, but was taken in tow by *Saida*, and finally all A-H warships returned safely to Boka.

³² At this occasion, a total of 14 drifters, fishery vessels equipped with anti-submarine nets, were sunk.



Return of the Austro-Hungarian cruisers with *Sankt Georg* to Boka on 15 May 1917. In the lower right corner *Warasdiner* could be seen. (Selinger)

On 1 August 1917, *Warasdiner* escorted with the torpedo boat **63** the German submarine *UC 53* (a.k.a. *Ub. 95*) that was underway to lay mines in the Mediterranean. In late August, she escorted with *Ulan* and four torpedo boats the ironclads *Budapest* and *Wien* on one leg of their voyage from Boka to Pula and Trieste. Underway several enemy warships were sighted near Cavtat (British cruiser *Weymouth* with the Italian *Nino Bixio*, and a pair of French and Italian destroyers), covering the destroyers *Mirabello* and *Schiaffino* during minelaying, but no skirmish followed, as both sides were eager to complete their original missions. On 27 September, *Warasdiner* was sent with *Tátra*, *Balaton*, *Csepel*, and *Csikós* to Brindisi, to assist the A-H seaplanes returning from an attack on this harbor. Later she escorted several more convoys and submarines in front of Boka, and was moved to Trieste on 12 December, together with *Orjen*, *Ulan*, and *Csikós*. On 14 December 1917, she returned to Đenovići, to escort afterwards the German submarine *UC 27* (a.k.a. *Ub. 90*) under *KptLt* Wilhelm Canaris (the later chief of the German *Abwehr*). On 16 December, there followed a raid to Brindisi that brought no results, similar to the night raid into the Otranto Straits on 16 January 1918, together with *Uskoke* and *Csikós*. On 26 January, *Warasdiner* was attacked unsuccessfully near Koločep by an enemy submarine (probably the French *Coulomb*, that operated near Boka at this time). *Warasdiner* was still in Boka on 1 February 1918, as the sailors mutiny broke out, because of poor living conditions aboard and from a wish for peace at any price. On *Warasdiner* the red flag was hoisted, similar to *Balaton*, *Orjen*, and *Tátra*, and in contrast to *Huszár*, and *Dinara*, where this measure was not carried out. *Warasdiner* left the dangerous part of the anchorage, together with *Novara* and *Helgoland*, other five destroyers, and five torpedo boats, and went through the Verige passage to the inner Bay of Morinje. The mutiny was over on 3 February (see also under *Dinara* and *Huszár*).

Warasdiner was a lucky ship up to 15 February 1918; as she was escorting the steamer *Hercegowina*, she was rammed by her during a storm because of bad visibility. The destroyer was to return to Pula, where her stern and rudder were repaired, and boilers replaced. The repairs lasted longer than estimated, as during a shooting exercise on 9 June, one gun fired prematurely, the ship was damaged anew, with one crew member killed, and other four

wounded. From 16 June onwards, *Warasdiner* escorted convoys again, supported seaplanes and was sweeping mines. On 3 July, she was searching for mines in the Bay of Kvarner with eight torpedo boats and was attacked unsuccessfully by the Italian submarine *Argonauta* (TV Legnani). Another failed submarine attack followed near the Italian harbor of Lecce on 16 July, but the attacker remained unknown. At this time *Warasdiner* was commanded by KK Friedrich von Wimmer.



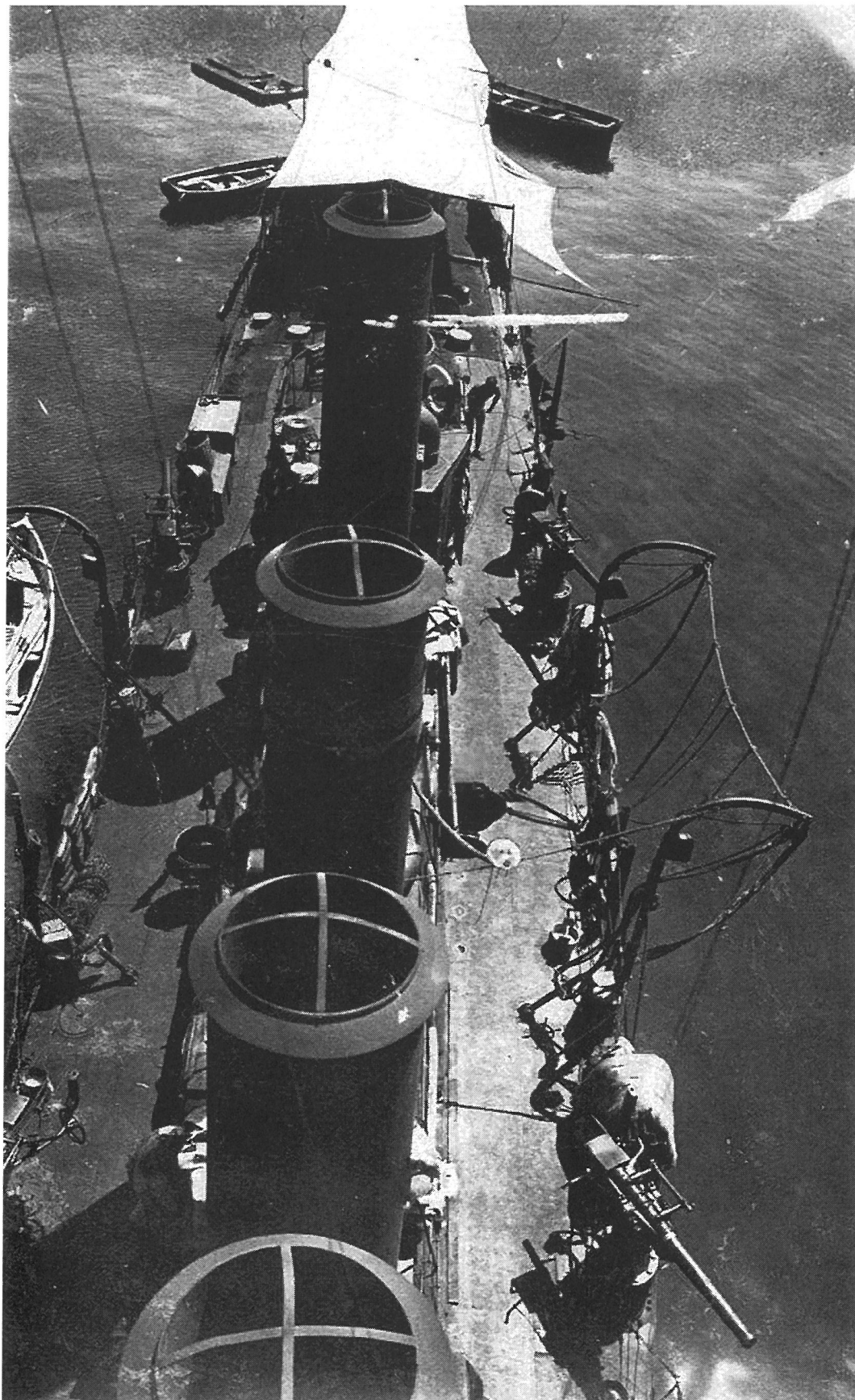
Destroyer *Warasdiner*, a view from forward. (Traiber)

As the Austrian steamer *Euterpe* was sunk on 11 August near Pag by the Italian submarine *F 7* (TV Mario Falangola) with over 450 men drowned, and about 390 being rescued, *Warasdiner* was sent to hunt for the submarine, together with the submarine chasers *Arsa* and *Slavija*, and the torpedo boats *78*, *80*, and *93*, but this operation was interrupted by a strong gale (bora). On 22 September, *Warasdiner* attacked in vain another submarine near Crna Punta on the east coast of Istria, and on 27 September, as she was escorting two steamers in the same waters, she sighted the Italian submarine *F 10*, but her attack brought no results.

On 31 October 1918, the destroyer hoisted the Croatian flag with other A-H warships in Pula, as they were handed over to the representatives of the National Council of the S. H. S. State, but several days later, Pula was occupied by the Italians, and little by little almost all warships were seized. *Warasdiner* was officially ceded to Italy in 1920, and scrapped, like all other vessels of this class except *Ulan*.

CONCLUSION

The destroyers of the *Huszár* class belonged to a proven type, usable for the Adriatic operations. Their main deficiency were their scarce dimensions and the low forecastle, and their triple-expansion engines were in principle already obsolete, as steam-turbine driven destroyers were already built. The relatively weak artillery armament was reinforced before the World War One and included six 2.4in (7 cm or 66 mm) guns, but five of these were of the short type, as longer guns could not be mounted on the positions of the former 47 mm guns. The contemporary British destroyers were armed with two 4in and two or three 3in guns, and some Italian and French destroyers were armed similarly or even weaker than the *Huszárs*. Twelve destroyers of this class were ordered, but in fact fourteen were built, if one count the "reconstruction" of the *Huszár* as a new construction. The 14th vessel was an unexpected new arrival, *Warasdiner* being the former Chinese *Lung Tuan*, ordered, but not taken over by the Chinese Navy. All destroyers of the *Huszár* class were intensively taking part at various operations during the World War One, and only two were lost, one from a floating mine, and another being rammed by an escorted steamer. The latter occurred to other ships on the Adriatic as well, because of bad visibility, but they had more luck and remained afloat.

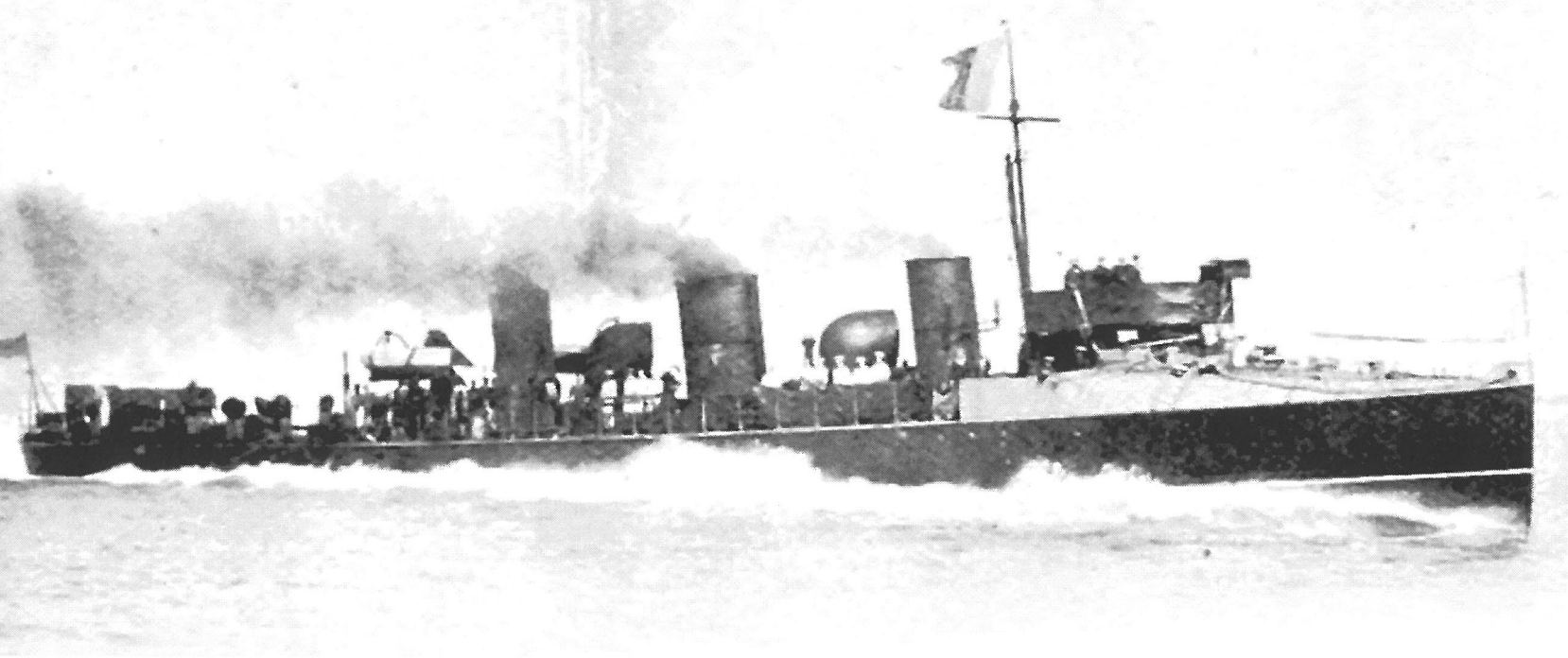


Destroyer of the *Huszár* class, a view forward from the mast top. (Pawlik)

DESTROYERS OF THE *TÁTRA* CLASS

On 6 October 1904, Vice-Admiral Hermann von Spaun resigned from the post of the C-in-C of the Austro-Hungarian Fleet and the Chief of the Navy Section of the War Ministry, as he disagreed with the financial policy of the War Ministry regarding the budgets of the Army and Navy. His successor Vice-Admiral Rudolf Count Montecuccoli-Polinago was promoted to Admiral on 1 May 1905. He was, like Spaun, a proponent of a stronger navy, believing that the A-H Navy would soon be surpassed by the fleet of the Italian neighbor. Especially there were not enough destroyers, and from the existing seven, only two – *Magnet* and *Satellit* – were partially useful, but still weaker than their Italian counterparts. He proposed a new Fleet Program, to include twelve battleships, four armored cruisers, eight smaller cruisers, 18 torpedo vessels (destroyers), 36 high-sea torpedo boats, 48 smaller torpedo boats, six submarines, two torpedo depot vessels, and one minelayer. In addition to the already ordered twelve destroyers of the *Huszár* class, six more were to be built, as the old *Satellit*, *Trabant*, *Planet*, *Blitz*, *Komet*, and *Meteor* could serve on secondary duties only.

At this time, the triple-expansion steam machines reached the peak of their development, and further increase of their strength was possible only by increasing their dimensions and weight, what was not desirable for small and fast vessels. Already in late 19th Century, the Swedish Engineer Carl Gustav Patrik de Laval (in 1883), and British Engineer Charles A. Parsons (in 1884) invented steam turbines to power electric generators on land. Parsons was contemplating the ship propulsion as well, and he built the experimental boat *Turbinia* with a displacement of 44.5 tons, propelled by one steam turbine. First experiments were unsuccessful, but with three propellers on a single shaft, *Turbinia* reached a speed of 19.75 knots. Parsons divided the turbine into several stages, with the high-pressure and the intermediate-pressure turbines driving both outer shafts, and the low-pressure turbine together with the turbine for driving backward were coupled to the central shaft. On 10 April 1897, with this arrangement *Turbinia* reached a speed of 32.76 knots, a speed record at this time. With forced draught, a speed of 34.5 knots could be attained for a short time. The Parsons Marine Steam Company signed in March 1898 a contract with the Royal Navy for a turbine-driven destroyer. HMS *Viper* reached the maximum speed of 37.11 knots on 13 July 1900, and on 31 August, she steamed for three hours at the average speed of 33.38 knots. At the same time, Armstrong, Whitworth & Co. from Elswick built the destroyer HMS *Cobra* that attained the maximum speed of 36.63 knots, and the average speed of 35.1 knots. The service of both ships was not lasting long: *Viper* stranded and was a total constructive loss on 3 August 1901, and the hull of *Cobra* was too weakly build, and she fell apart on 18 September of the same year, but the experiments had clearly shown what was possible with turbines. The A-H Navy was following closely this development in Great Britain, and in early 1904, A-H Shipbuilding Engineer Siegfried Popper was present at the trials of a new British destroyer, powered by turbines on both outer shafts and by a triple-expansion steam machine on the central shaft, to economize on coal. As the Yarrow shipyard offered this vessel to the A-H Navy, Popper was against it, as the coal consumption was still too high. The Royal Navy proceeded to order turbine-driven destroyers, five of these with oil-firing boilers, and HMS *Tartar* (with 945 tons displacement), built by Thornycroft, reached a speed of 40.2 knots.

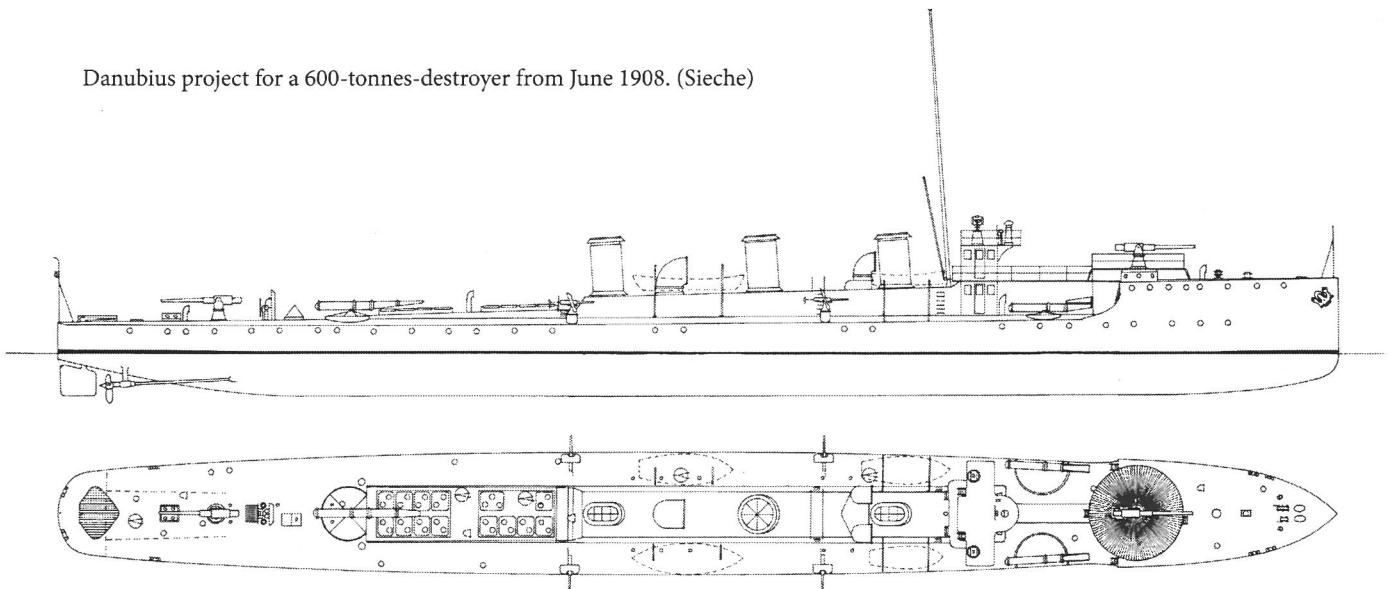


British turbine-driven destroyer HMS *Viper*. (Wikipedia)

In January and February 1909, the A-H Navy Section was contemplating building larger destroyers with turbine propulsion, and at the same time it was clear that the *Huszár* class destroyers were too weakly armed. Thus it was proposed to arm new vessels with 10 cm (3.9in) and 7 cm (2.6in) guns. On 9 March 1909, a competition has been announced, and several A-H and foreign shipyards asked for their offers for a 600-tonnes torpedo vessel with stronger armament. An average speed of at least 30 knots was to be reached.

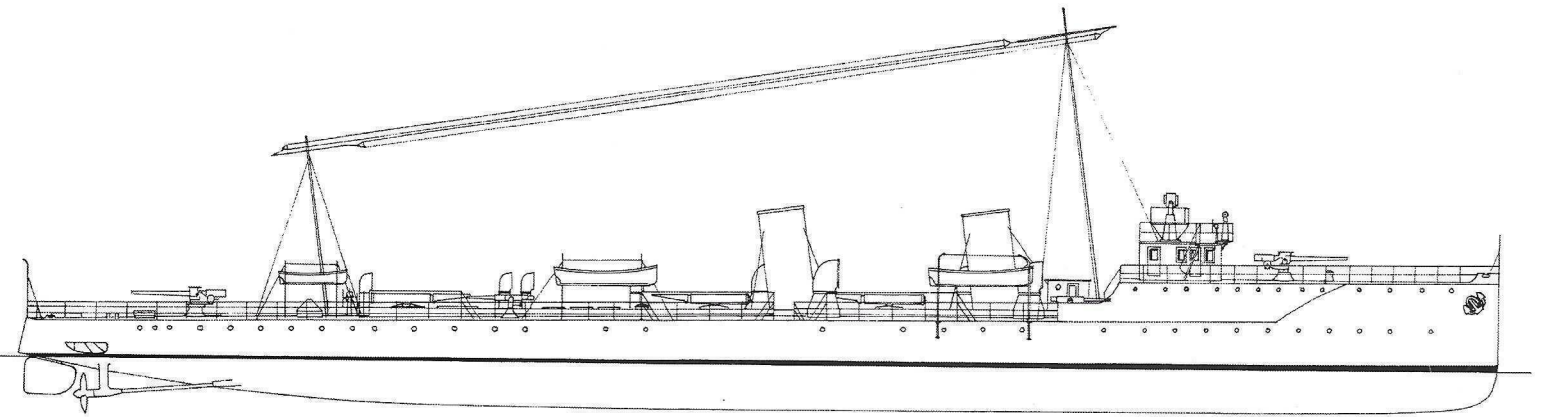
Several offers were submitted by S. T. T. from Trieste and Danubius from Rijeka, by the Schnabl Company from Trieste, as a representative for the American Lewis Nixon shipyard from New York, by the Germania shipyard from Kiel, Vulcan from Stettin, Schichau from Elbing, Yarrow from Glasgow, and Thornycroft from Southampton. S. T. T. and Danubius offered to build ships armed with two 10 cm and four 47 mm guns, and with two or three 45 cm (17.7in) torpedo tubes, as a stronger armament was not possible on the given displacement.

Danubius project for a 600-tonnes-destroyer from June 1908. (Sieche)



Germania from Kiel offered a destroyer with two 10 cm guns and four torpedo tubes, and Vulcan from Stettin a ship with two 10.5 cm (4.1in) guns and three torpedo tubes. British Yarrow shipyard proposed an "enlarged *Huszár*" with six 7 cm guns and four torpedo tubes, and Thornycroft was offering a vessel with two 10 cm and two 7.5 cm guns and only two torpedo tubes. The exotic design of Lewis Nixon Co. was to be propelled by six gasoline (!) engines with a total output of 12,000 hp, and the destroyer was to be armed with four 5in guns, six 6.5 mm (.25in) Colt machine-guns and four torpedo tubes.

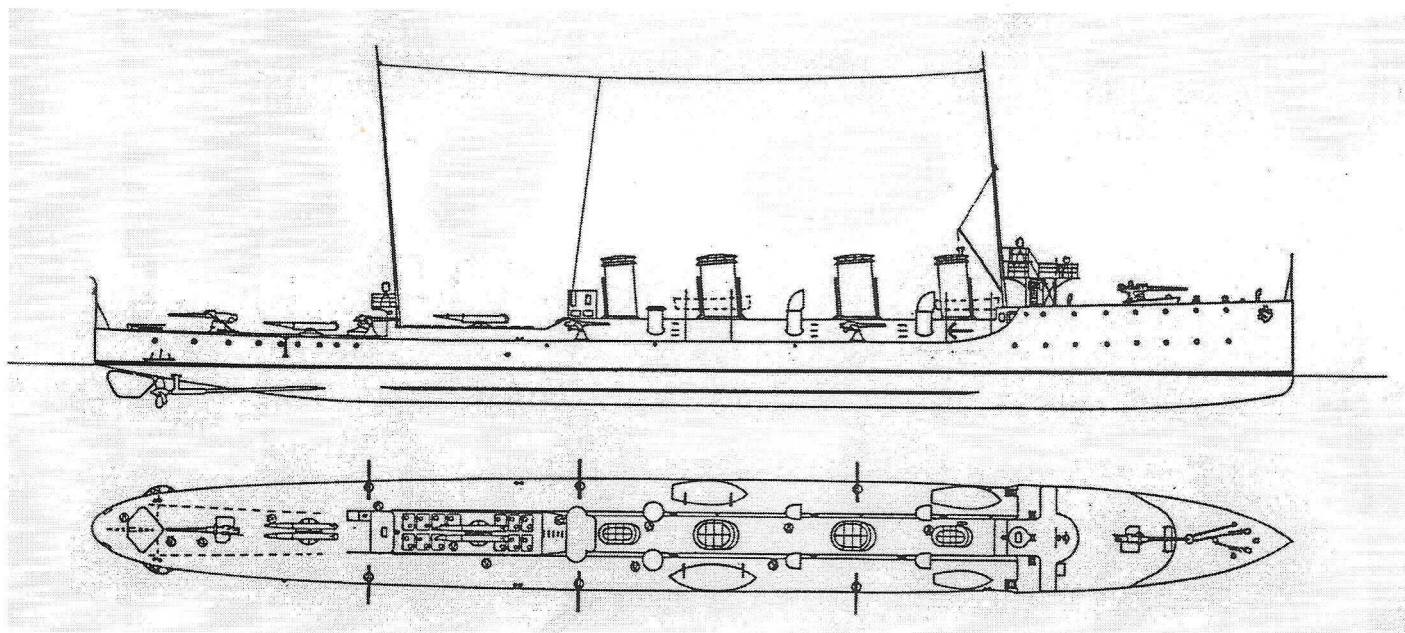
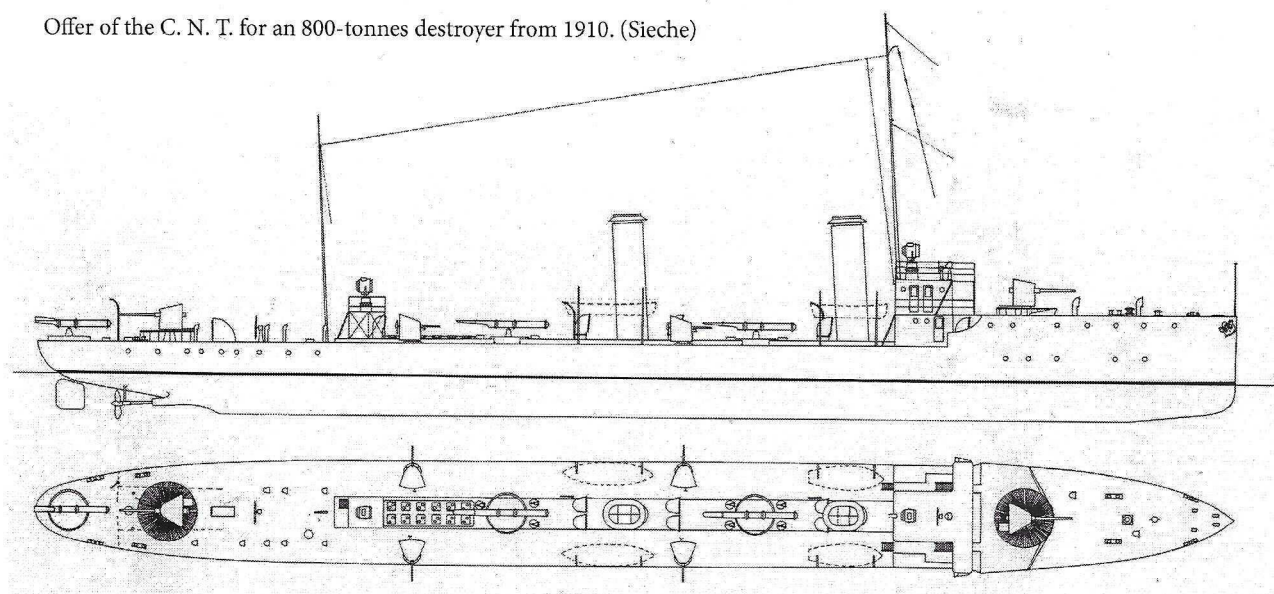
The Navy Section was not really satisfied with these offers; three of these – sent by Vulcan, Schichau and Danubius – remained on the shortlist, but the displacement was to be raised to 800 tonnes. In January 1910, the Navy Section invited four shipyards, the S. T. T. from Trieste, Cantieri Navali Triestini (C. N. T.) from Monfalcone, Vulcan from Stettin, and Danubius from Rijeka (primarily from political and economic reasons, to prevent the newly established yard to be out of work after completing the *Huszár* class destroyers), to submit their offers for an 800-tonnes destroyer, with a average speed of 32.5 knots, with turbines of a proven type, with Yarrow water-tube boilers with combined firing (one third by coal and two third by oil), a range of 520 nautical miles at full speed, and to be armed with two 10 cm L/50 guns, four 7 cm L/45 guns, and three 45 cm torpedo tubes with a total of six torpedoes. The vessels were to be completed as soon as possible, and if the maximum speed remained below 31 knots, the A-H Navy was not bound to take them over or could buy them at a reduced price. The offers were to be submitted up to 15 July 1910.



S. T. T. design for a 760-tonnes destroyer from July 1910. (Sieche)

All four shipyards submitted their offers within the required time, but further negotiations (after a new intervention of the Hungarian Trade Minister) were conducted with Danubius only. The Navy asked for some modifications; initially there was not enough room for crew accommodations, and the forecastle was to be extended to the commando bridge. Thus the initially envisaged forward single torpedo tube between the forecastle and bridge was omitted, and two single torpedo tubes forward and aft of the mainmast were to be replaced by twins. The superstructures over the boiler rooms were lowered to reduce weight, and the hull lengthened (for 2.3 meters) according to trials in the hydrodynamic basin. The secondary artillery was increased to six 7 cm guns.

Offer of the C. N. T. for an 800-tonnes destroyer from 1910. (Sieche)



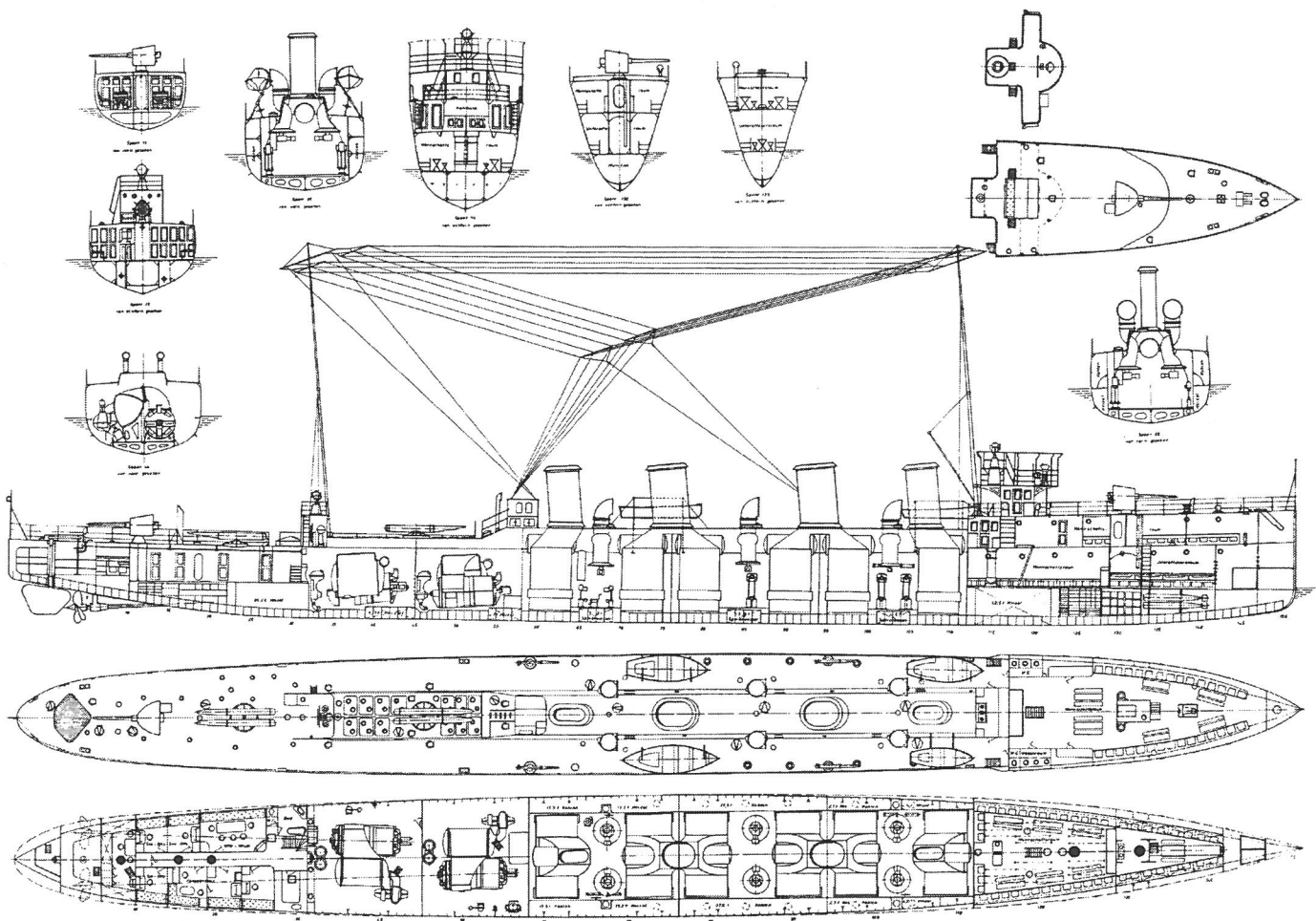
Side view and deck of a *Tátra* class destroyer. (Sieche)

Finally six vessels with a displacement of 800 tonnes and an average speed of 32.5 knots were ordered from Danubius on 13 June 1911, but detailed drawings and weight calculations were submitted to the Navy Section three months later. The ships were to be delivered to the Navy between the 28 February and 31 May 1913. The modifications asked for by the Navy were allegedly the reason for a weight gain of 53 tonnes, but the destroyers were in fact longer, more solidly built and better armed.

APPEARANCE AND PROPULSION

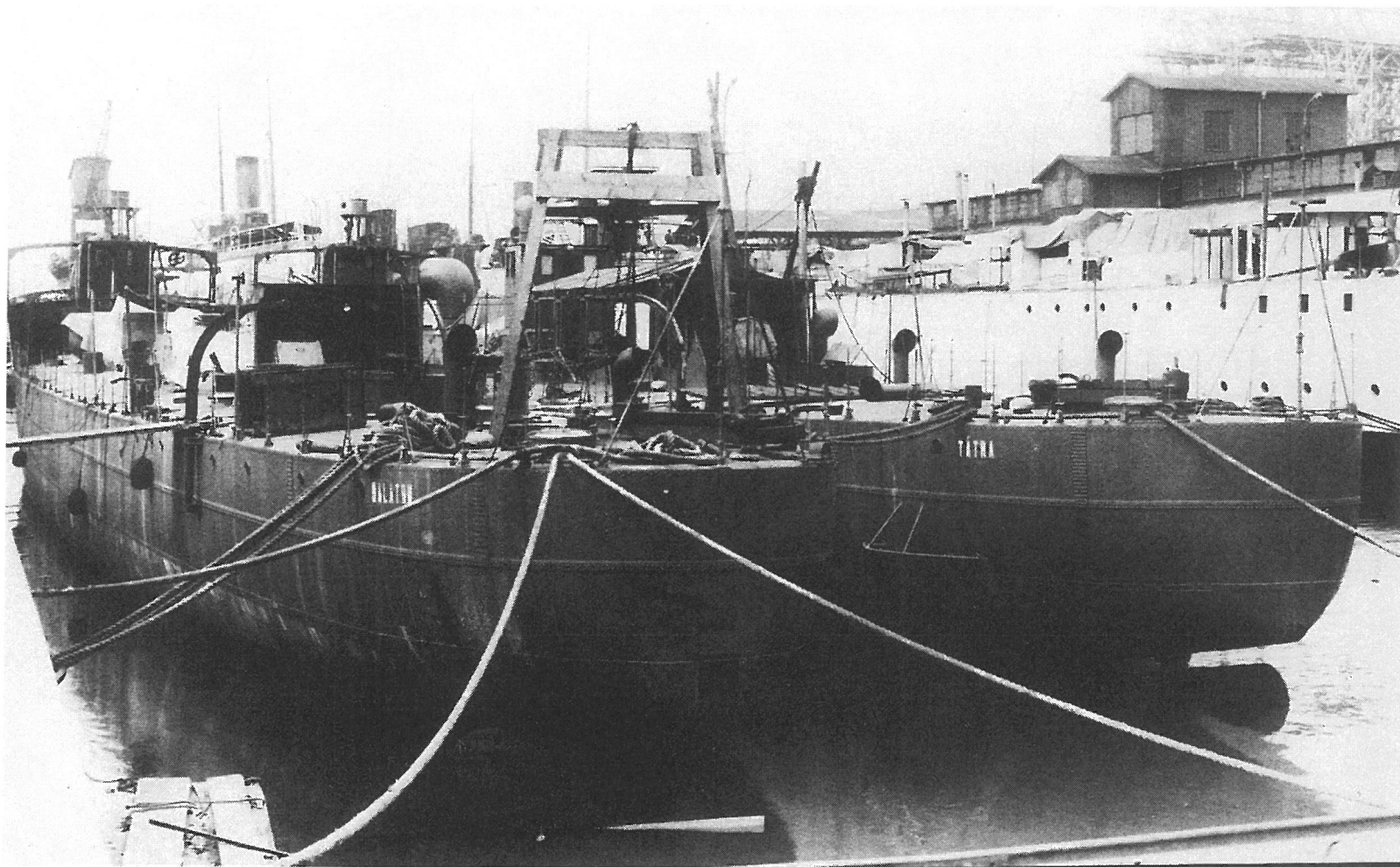
According to the weight calculations submitted by the shipyard, the design displacement of new destroyers was increased to 853.54 tonnes, and the full load displacement to 977 tonnes. The MTK came to other results, and according to their calculations, the design displacement would amount to 866.34 tonnes, and the full load to 1,000.03 tonnes. Finally the design displacement amounted to 850 tonnes, and the full load displacement to 1,050 tonnes. The length between the perpendiculars amounted to 80.70 m, over all to 83.50 m, with a beam of 7.80 m, and the draught between 2.42 and 3.20 meters. The raised forecastle extended to the aft edge of the commando bridge, with a windlass forward, and accommodations for the crew and petty officers on two levels under the forecastle. The petty officers quarters were on the lower level, under the main deck, one of the sailors quarters on the upper level, and another aft of the petty officers quarters.

The windlass machinery was installed in the middle of the upper sailors accommodation, and the forward ammunition magazine was arranged under the petty officers quarters. Aft of the crews quarters three boiler rooms were arranged in line, each one comprising two Yarrow water-tube boilers, being followed by two machinery rooms, arranged one aft of another. Aft of the second machinery room there were the officers' quarters, with the officers mess on the portside, and the cabins for the CO and the Chief Engineer on the starboard side. Aft of the officers accommodations there was the room with the steering apparatus with some storerooms right aft.



Tátra class destroyer – longitudinal and transversal sections. (Eichardt)

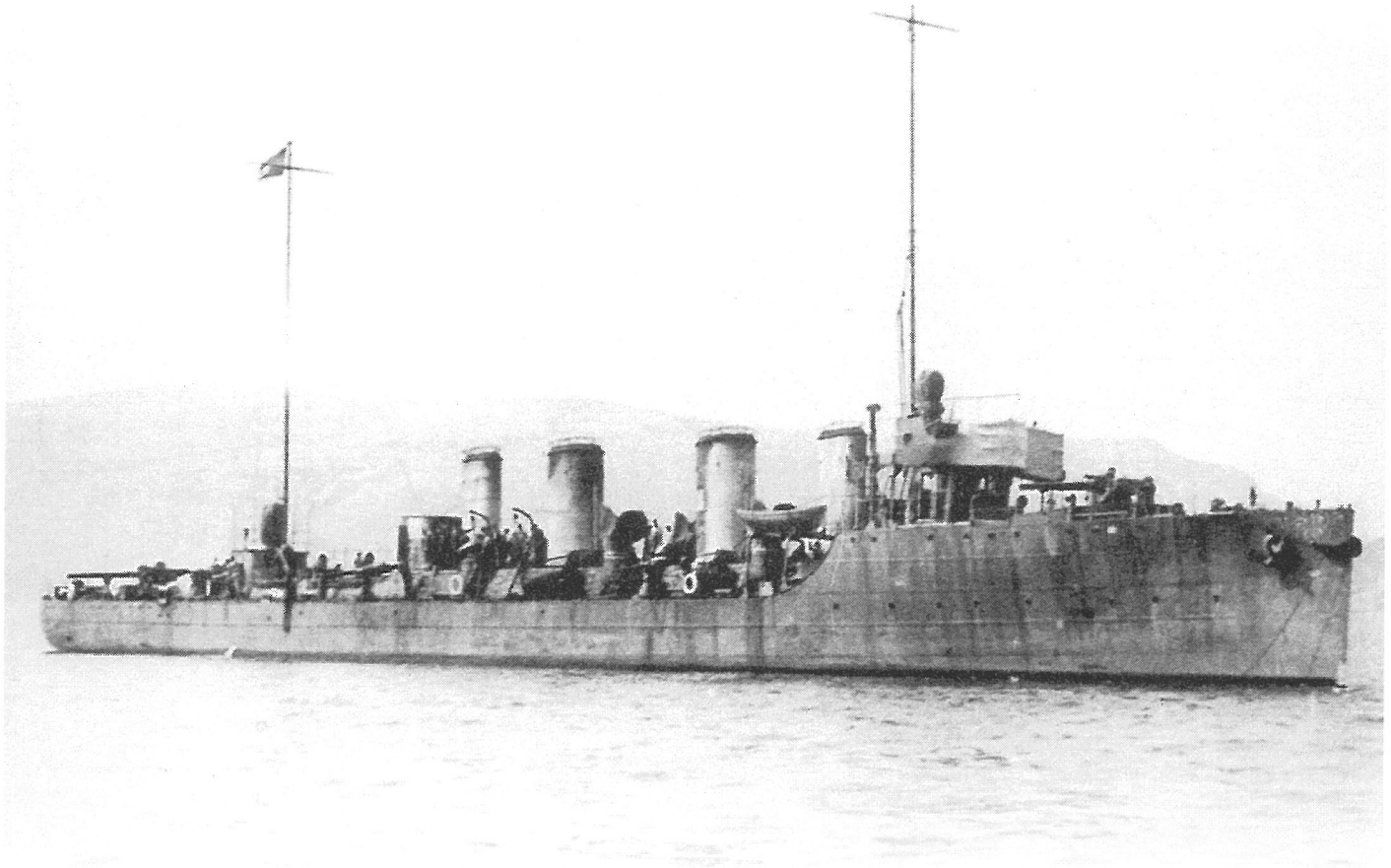
On the forecastle the forward 10 cm (3.9in) gun was mounted. The commando bridge was low, with the foremast at its aft edge, and with four funnels abaft. The middle superstructure around the funnels extended aft from the forecastle at the same level to the fourth funnel, where it was connected by a slope with the lower aft part of the superstructures, extended to the mainmast. Right aft of the fourth funnel there was the deckhouse with the wireless station (that was initially to be installed under the foremast). On the low aft superstructures there were the forward twin torpedo tubes, with the mainmast and the reserve steering position aft of these. The aft twin torpedo tubes and the aft 10 cm gun were mounted on the quarterdeck. Other six guns in 7 cm caliber were mounted in the broadside, three on each side. The foremast and the mainmast were of the same height, with wireless aerials spread between them. There were two searchlights, one on the commando bridge, and another on the roof of the reserve steering position.



Tátra and Balaton being fitted out in Rijeka. (Pawlik)

Four of six boilers were oil-fired, and another two coal-fired; in the bunkers there were 125 tonnes of oil and 104 tonnes of coal. The smoke uptakes from all six furnaces led to four funnels; the first and the fourth were slimer, with uptakes from the first and sixth boiler, and the middle pair was broader, with uptakes from four middle boilers. The steam was driving two AEG-Curtis steam turbine sets with a total of 20.500 hp (15.074 kW), each set in single machinery room. The Curtis turbines were slightly less efficient than the Parsons turbines, but were simpler, easier to maintain, and lighter. The forward turbine set was driving the starboard shaft, and the aft set the portside shaft. Coal bunkers and

oil tanks were installed athwartship of the boiler rooms, with some oil bunkers and water tanks below the machinery rooms. The ships were designed for the average speed of 32.5 knots, reaching the maximum speed of 32.6 knots. *Tátra* reached a speed of 32.59 knots with 20,560 hp during trials on 24 August 1913. *Triglav* reached 23.695 hp, and *Lika* the average speed of 32.96 knots during trials on 21 December 1913. The range amounted to 520 miles at full speed and to 1,200 miles at 20 knots.



Destroyer *Tátra* after being completed. (Pawlik)

ARMAMENT AND COMPLEMENT

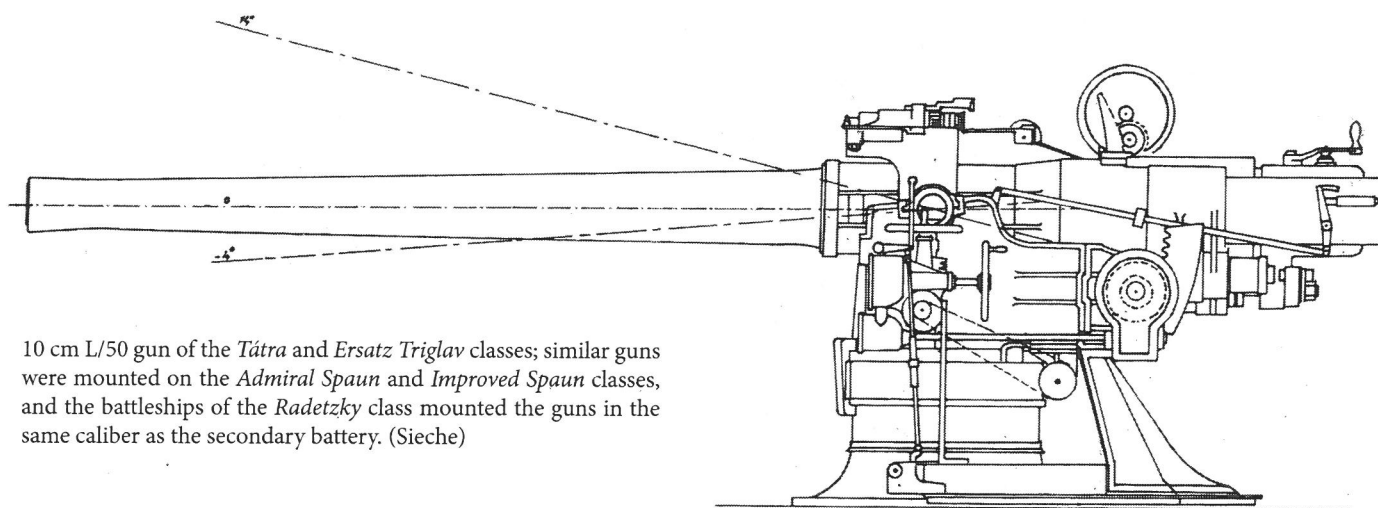
The main armament comprised two 10 cm (3.9in) L/50 guns, one forward, and another aft, designated as the 10 cm Geschütz L/50 K.11, produced by the Skoda company, and introduced in 1911. These guns also served as the main armament on the scout or fast cruisers (*Rapidkreuzer*) of the *Improved Admiral Spaun* class (*Saida*, *Helgoland*, and *Novara*), with *Admiral Spaun* and the battleships of the *Radetzky* class being armed with the older version (10 cm G. L/50 K.10). The weight of the barrel with the breech mechanism amounted to 2,020 kg, and of the whole mounting with the shield to 7,240 kg. The maximum elevation amounted to +18°, and the lowest depression to -4°. The fixed round has a mass of 26.7 kg, the propellant of 6.6 kg, and the shell of 13.75 kg. The maximum range at +14° amounted to 11,000 m, and the muzzle velocity to 900 m/sec.

The 7 cm (66 mm or 2.6in) L/45 guns were officially designed 7 cm L/45 K.09 TAG (*Torpedoboots-Abwehrgeschütze* = guns for defense against torpedo boats) and were also produced by the Skoda factory from Pilsen. The mass of the

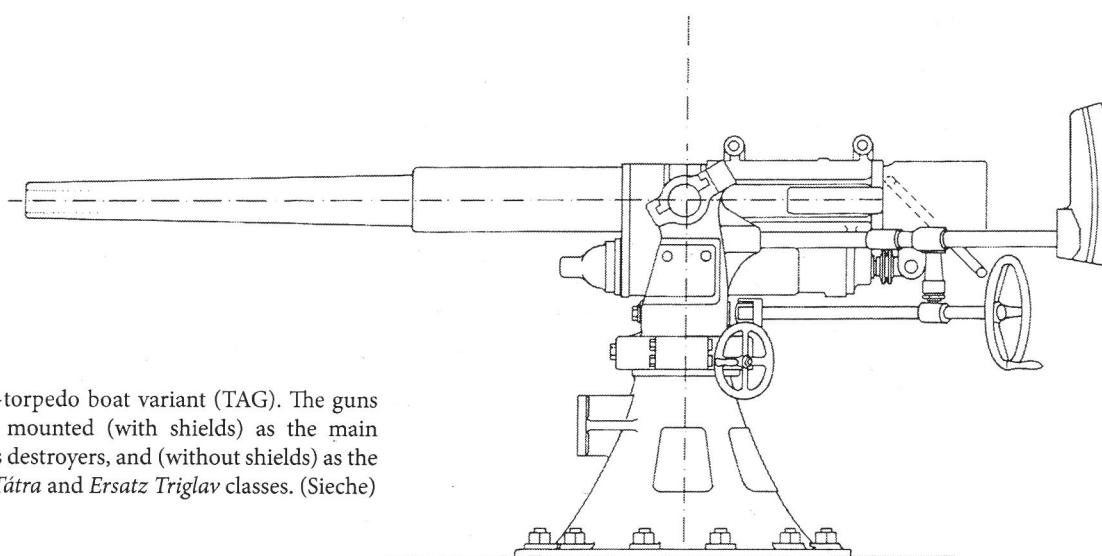
barrel with the breech mechanism amounted to 547 kg, the mass of the mounting with the pivot to 1,860 kg, the mass of the fixed round to 8.2 kg, and of the shell to 5 kg. The highest elevation amounted to $+20^\circ$ and the lowest depression to -10° , the muzzle velocity to 725 m/sec, and the range at $+9^\circ 56'$ to 6,000 meters. During the war, two 7 cm guns were replaced by the anti-aircraft variant (7 cm L/45 K.09 BAG), and the anti-aircraft defense was improved with one 8 mm Schwarzlose 07/12 machine gun in an anti-aircraft mounting (BAL = *Ballonabwehrlafette*) on each vessel of the class.

Two twin 45 cm (17.7 in) torpedo tubes were produced by the Whitehead company from Rijeka, to launch the 45 cm L/5 Whitehead torpedoes, with a length of 5.5 meters and a mass of 772 kg, including a 110 kg explosive charge. They were propelled by four-cylinder compressed-air engines, the pressure in the air tank amounted to 150 atm, and the range to 1,000 m at 42 knots or 6,000 m at 27 knots.

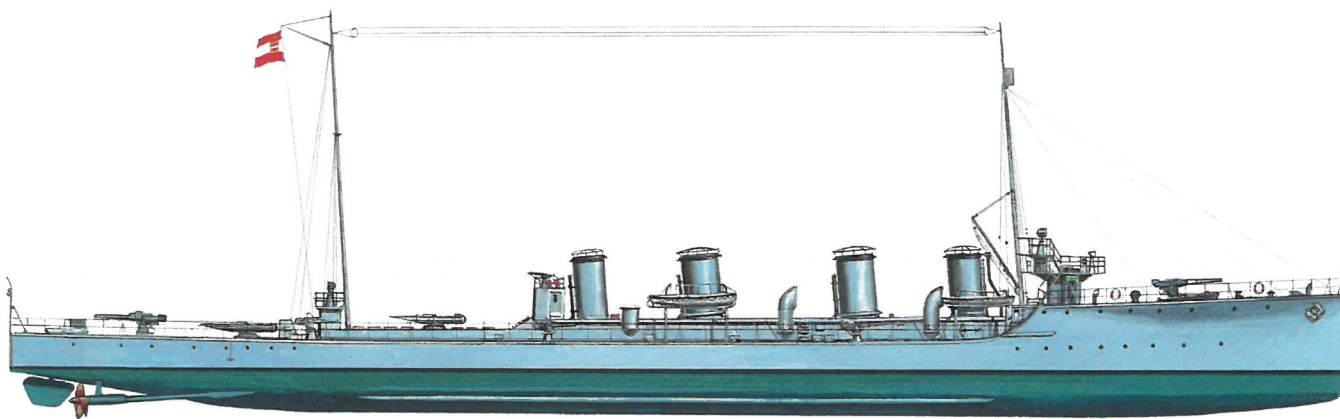
The ships had a complement of five officers with 100 petty officers and sailors.



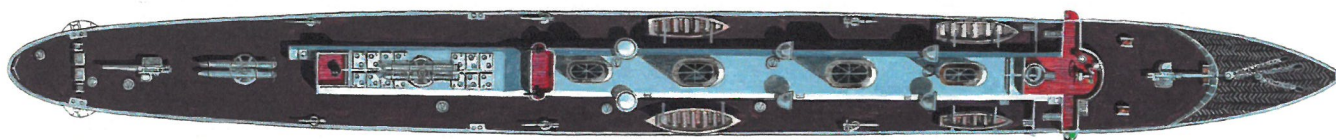
10 cm L/50 gun of the *Tátra* and *Ersatz Triglav* classes; similar guns were mounted on the *Admiral Spaun* and *Improved Spaun* classes, and the battleships of the *Radetzky* class mounted the guns in the same caliber as the secondary battery. (Sieche)



7 cm L/45 gun in the anti-torpedo boat variant (TAG). The guns of the same caliber were mounted (with shields) as the main artillery on the *Huszár* class destroyers, and (without shields) as the secondary artillery on the *Tátra* and *Ersatz Triglav* classes. (Sieche)



Side and deck elevations of a *Tátra* class destroyer. (Eichardt)



Tactical and technical data of the *Tátra* class destroyers

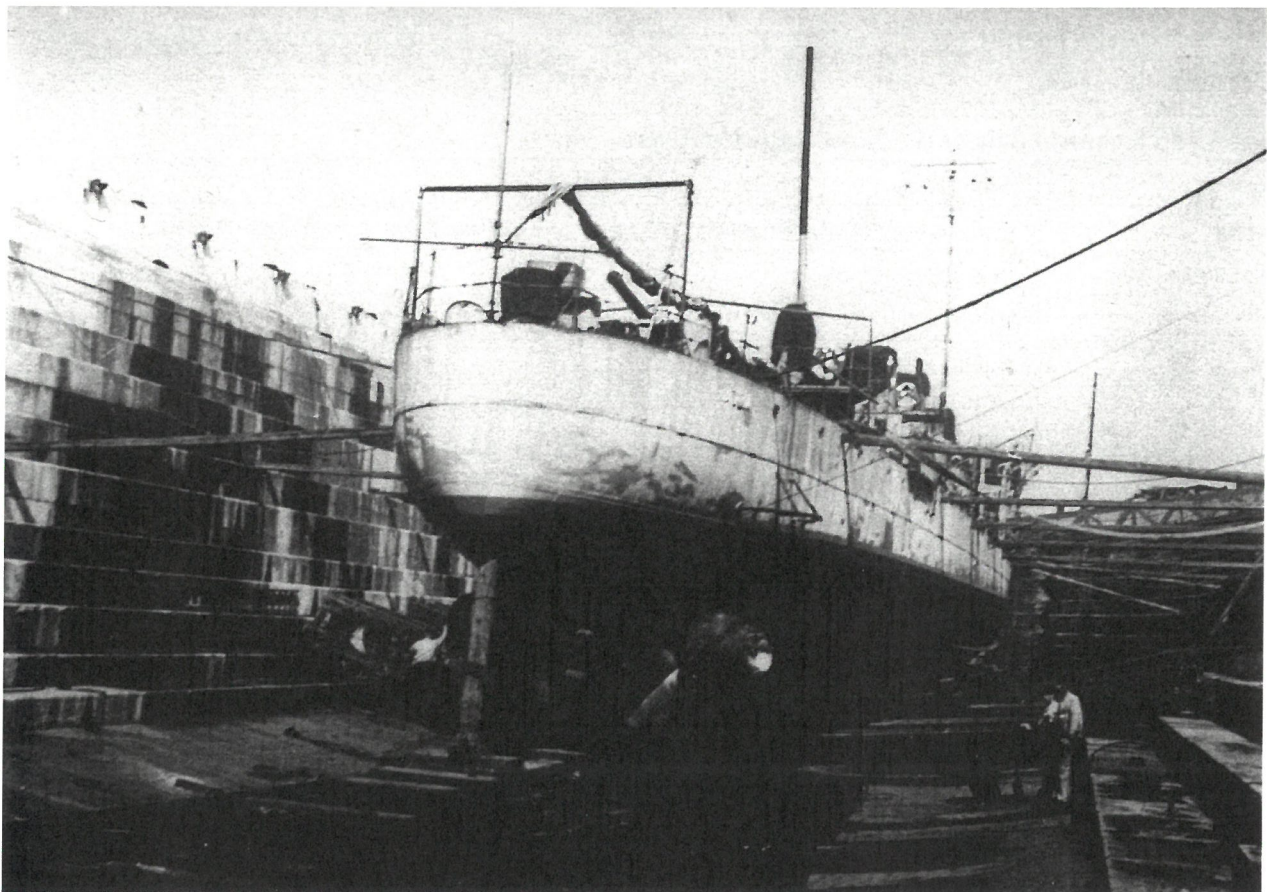
Displacement	Design displacement 850 tonnes, full load 1,050 tonnes.
Dimensions	Length between perpendiculars 80.7 m, over all 83.5 m, beam 7.8 m, draught 2.42 – 3.20 m.
Output of the turbines	20,500 hp (15,073 kW).
Speed	Maximum 32.6 knots, average 32.5 knots, cruising 20 knots.
Range	520 miles at 32.6 knots, 1,200 miles at 20 knots.
Armament	Two 10 cm (3.9in) L/50, four 7 cm (2.6in) L/45 TAG and two 7 cm L/45 BAG, four 45 cm (17.7in) torpedo tubes (2x2).
Complement	Five officers, 100 petty officers and men.

Building of the *Tátra* class destroyers

Six vessels were christened after Austro-Hungarian mountains (*Tátra*, *Csepel*, *Triglav*, *Orjen*), lakes (*Balaton*), or provinces (*Lika*), and designated *Tátra* class. All were built in the Kraljevica (Porto Rë) subsidiary of the Danubius shipyard. First three vessels were completed in 1913, but three months too late, and were operational only in 1914. Other three vessels were commissioned only after the World War One already has begun.



Launching of *Tátra* from the slip in Kraljevica. (Frka)



Tátra in the dock in Pula. (Greger)

One of the reasons for the late completion were modifications of plans during building (like the lowering of the superstructure around the funnels by 60 cm), and other were problems with the turbines. First components (rotors with blades) delivered by the Reschitza factory were defective, and new rotors were ordered from the Skoda factory. Later at speed the whole hull was vibrating; there came to a friction between hot rotor blades and fixed stator nozzles, as the space between them shrank, what resulted in vibrations. This problem was solved by a specialist of the AEG factory from Berlin. During building, the weight of many components and systems steadily grew; for the electric installation the increase amounted to 5.5 tonnes, the additional tubing inside of the oil tanks was 500 kg over the estimated weight, the elastic tiller base weighed 500 kg, the wireless station 750 kg, and the racks in the wine depot 400 kg³³.

After *Tátra* was launched on 5 November 1912, first trials were conducted in July 1913, but two of these were aborted because of malfunctions. The Navy Commission, led by FK Janko Vuković-Podkapelski³⁴, found out at the take-over of the vessel on 12 October 1913, that the shipyard drawings were not accurate, and were not showing all the installed parts, and that the riveting was badly performed, probably by poorly trained workers. The shipyard answered that the blame was with the Navy that was constantly asking for modifications, and finally get exactly the vessels it wished. At the first docking of *Tátra* and *Balaton*, it was revealed that their outer shaft bearings were damaged, and the same was found on the third vessel, *Csepel*. Thus the Navy refused to take over *Csepel* and *Lika* before these damages were repaired. The shortening of screw blades on *Tátra* by 100 mm brought no improvement. Finally the outer shaft bearings were lengthened on all vessels of the class, and their screws were replaced during the next docking (already after the war broke out) with new bronze propellers with 2,400 mm in diameter, manufactured by the Naval Arsenal in Pula. During a gale on 12/13 December 1914, it was revealed that neither the gunnery nor the torpedo tubes could be manned at bad weather, and that it was necessary to improve the water-proof seals on doors and sidelights on the bridge, and the isolation of electric cables on deck. The vessels rolled heavily but seemed to be sturdy. Only the CO of *Lika*, FK Wünschek, stated that it seemed to him that the longitudinal ribs were bending; the ship was rolling up to 30° on each side, and the deck was often flooded.

Name	Shipyard	Keel laying	Launching	Delivery
<i>Tátra</i>	Danubius, Kraljevica	19/10/1911	05/11/1912	12/10/1913
<i>Balaton</i>		06/11/1911	16/11/1912	28/10/1913
<i>Csepel</i>		09/01/1912	30/12/1912	29/12/1913
<i>Lika</i>		30/04/1912	15/03/1913	08/08/1914
<i>Triglav</i>		01/08/1912	22/12/1913	08/08/1914
<i>Orjen</i>		04/09/1912	26/08/1913	11/08/1914

SERVICE AND FATES

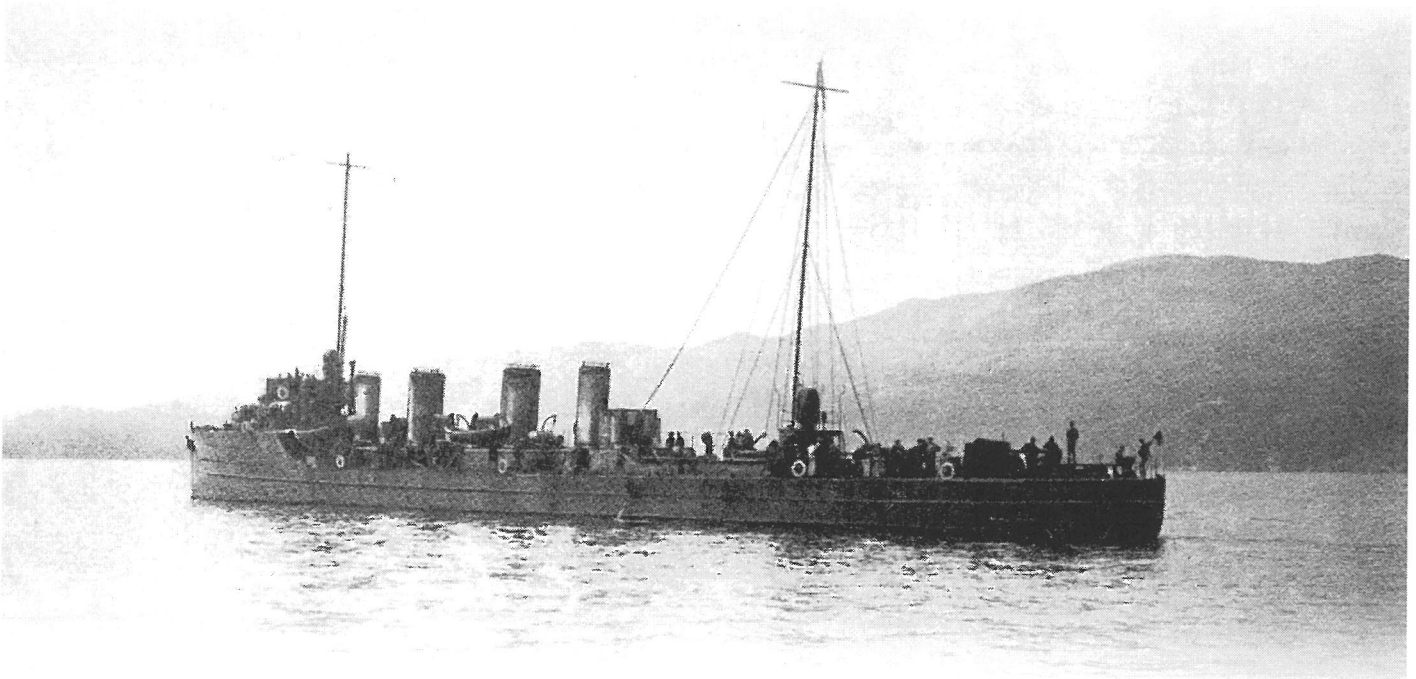
All six destroyers of the *Tátra* class formed the 1st Torpedo Division of the 1st Torpedo Flotilla, with *Csepel*, *Tátra*, and *Balaton* as the 1st Destroyer Group (*1. Fahrzeuggruppe*), and *Lika*, *Orjen*, and *Triglav* as the 2nd Destroyer Group.

TÁTRA was to be repaired after commissioning, like other vessels of the class, and her first CO was KK Joseph Ieva. On 7 August 1914, she sailed from Pula with other active ships of the fleet (three battleships of the *Tegetthoff* class, three of the *Radetzky* class, two cruisers, destroyers *Csepel*, *Scharfschütze*, *Velebit*, *Huszár*, *Dinara*, *Wildfang*, *Csikós*, and twelve torpedo boats) to receive the German battle cruiser *Goeben* with the cruiser *Breslau*, but as German warships went to Turkey instead, the fleet returned to Pula. On 23 August, *Tátra* was searching for survivors from the torpedo

³³ Wine had the same importance for the A-H Navy, as rum for the old *Royal Navy*.

³⁴ Janko Vuković-Podkapelski (1871, Jezerane/Lika – 1918, Pula) distinguished himself during the war, and became the first C-in-C of the S. H. S. Navy on 30 October 1918, being promoted to Rear-Admiral on 31 October, but perished at dawn of 1 November 1918, as his flagship *Viribus Unitis* was mined by the Italian frogmen.

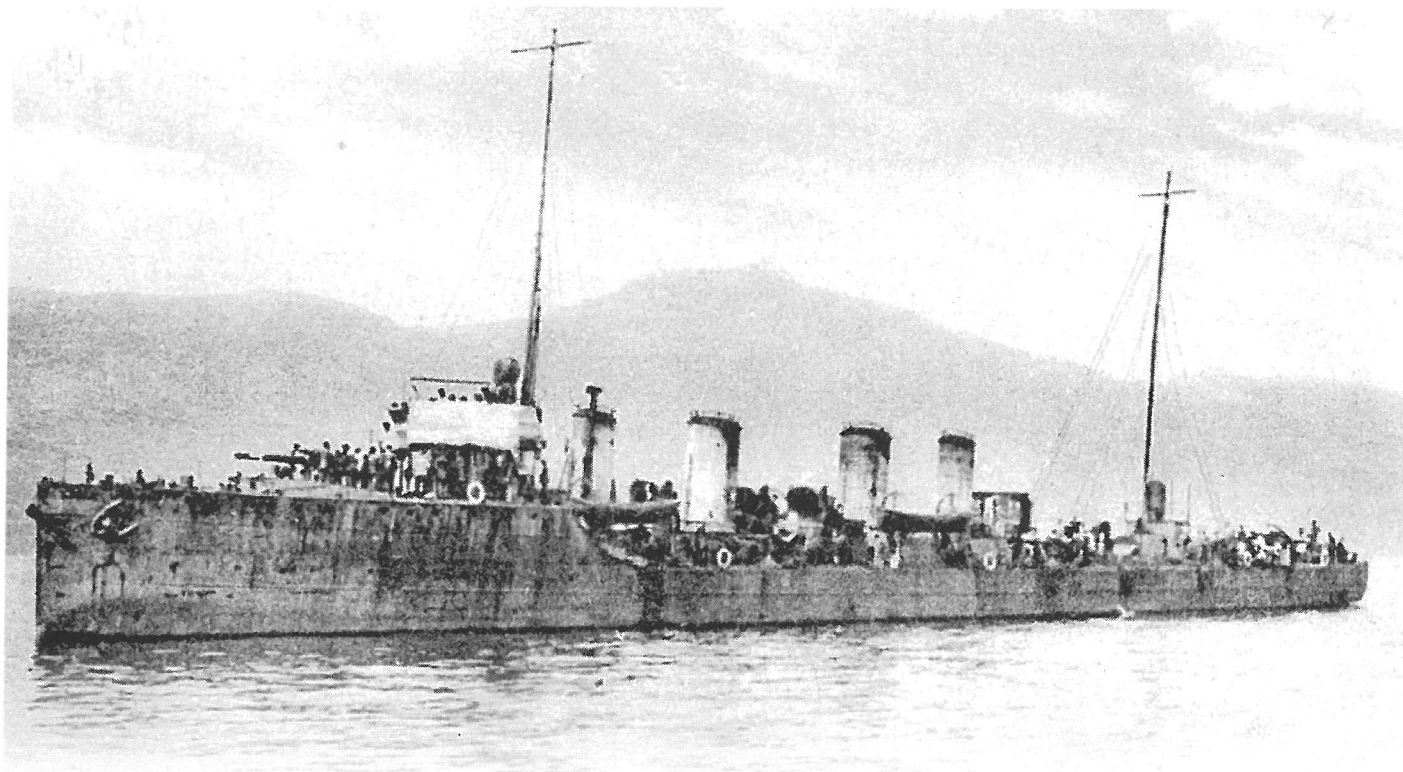
boat **26** (ex-*Flamingo*), sunk after hitting a mine off Pula. On 14 September, *Tátra* was sent to Šibenik, and after returning at Pula on 18 September, her outer shaft bearings and propellers were replaced. On 13 October, she was armed with an 8 mm anti-aircraft machine-gun as well. From 14 October onwards, *Tátra* was searching for mines in the Bay of Kvarner, was on a scouting mission between Palagruža and Bari on 17 October, and returned to Pula on 18 October, to sweep mines again in Kvarner on 26 October. She was detached to Šibenik on 27 October, and to Vis on 2 November. New docking in Pula followed between 21 November and 9 December, and she was sent to another scouting mission to Šibenik on 12 December. Underway she was heavily damaged by a gale (strong south wind), and was to be docked in Pula again, remaining there from 24 to 31 December 1914. During trials on 1 January 1915, there came to a rudder malfunction, she came off course and her port screw was damaged on the harbor barricade. After the next docking she was searching for mines again, to be moved later Šibenik to Boka, arriving there on 26 January. On 18 February, she sortied out with the cruiser *Helgoland*, the destroyers *Csepel*, *Balaton*, *Orjen*, *Lika*, *Triglav*, and three torpedo boats to patrol in the Otranto Straits, but without meeting enemy warships, sighting only the Greek cruiser *Elli* off Vlorë near the Saseno Island. *Tátra* was afterwards stationed again in Boka, Šibenik, and Pula, receiving her new bronze propellers finally in May 1915.



Tátra underway. (Bilzer)

On 18 May, *Tátra* brought one German naval officer at Boka, where a new base for German submarines was to be formed, and on 22 May, she joined other vessels of the Group G (cruiser *Helgoland* with *Csepel*, *Orjen*, and *Lika*), patrolling off Palagruža. She took part at the large attack by the A-H fleet on Italian coastal cities on 24 May 1915 and was shelling Manfredonia. After Italian destroyer *Turbine* was sunk by *Csepel*, *Lika*, and *Tátra* (see under *Csepel*), *Tátra* rescued her CO and 19 crew members. Later followed a short skirmish between *Helgoland* and Italian cruiser *Libia* with the auxiliary cruiser *Città di Siracusa*. On 7 June, *Tátra* was searching for a missing A-H seaplane, on 5 and 6 July, she was laying mines off the Gargano Peninsula together with other five destroyers of the 1st Torpedo Division, and on 13 July, she was on a reconnaissance mission with the seaplane *L 51* of Palagruža, occupied by the Italians already on 11 July. Their troops were landed from the auxiliary cruiser *Città di Palermo* and four destroyers of the *Ardito* class,

being covered by cruisers *Quarto* and *Marsala*, together with armored cruisers *Giuseppe Garibaldi* and *Varese*, and a score of French and Italian destroyers. *Tátra* shelled the island and was at this occasion attacked by French submarine *Fresnel*, laying in ambush off Palagruža; her torpedo missed, and the counterattack by depth charged brought no results as well. On 22/23 July, *Tátra* was shelling the Italian railway line near Termoli, and on 27/28 July, on 16/17 August, and on 8/9 September she took part at three more attacks on Palagruža.



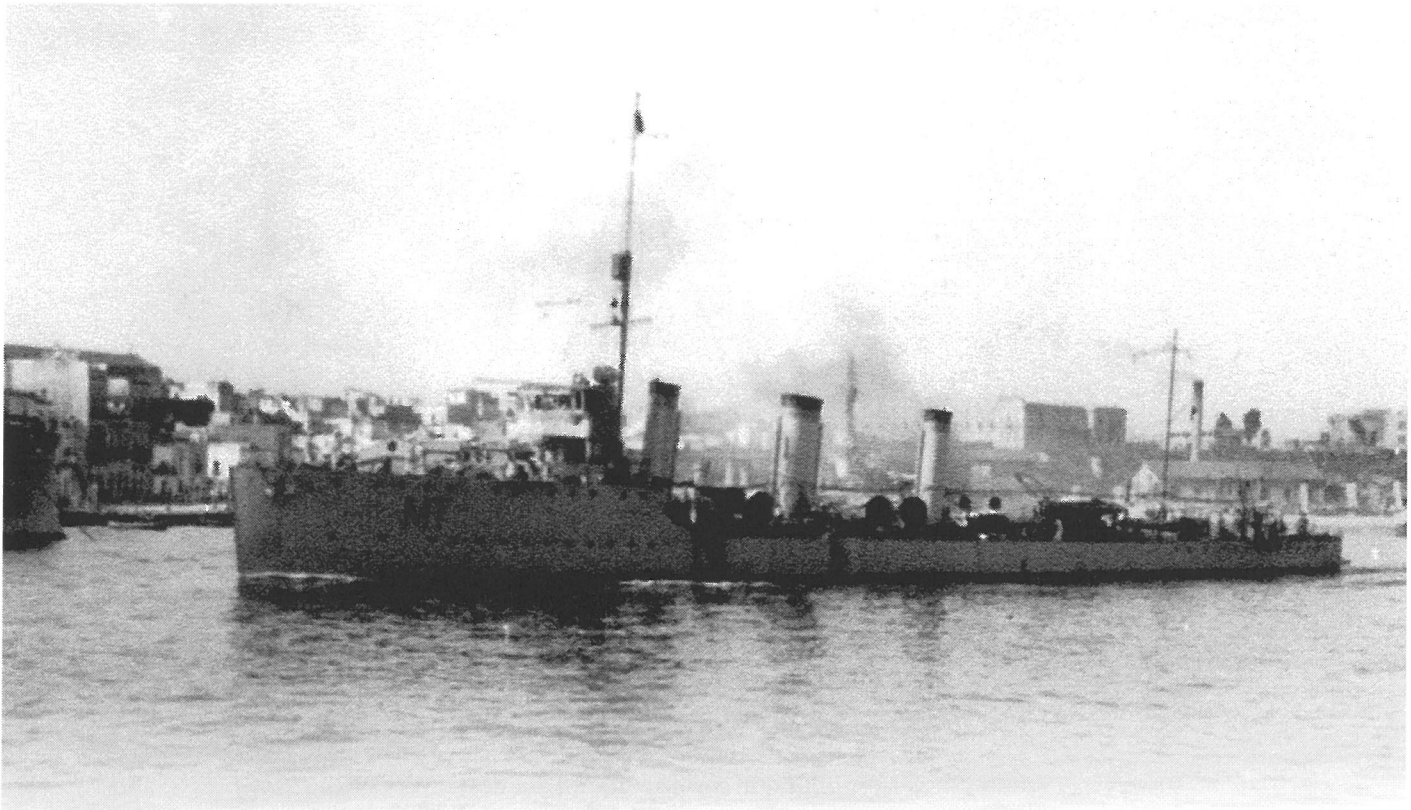
Tátra during her service. (Schrott)

The first such attack was executed by *Helgoland* and *Saida* with all six destroyers of the *Tátra* class, and two torpedo boats. The landing attempt failed, as the Italian garrison was stronger than estimated, and the A-H forces were compelled to retreat. At the second attack, *Helgoland* and *Saida* took part with *Tátra*, *Balaton*, *Orjen*, *Csepel*, *Lika*, *Velebit*, *Dinara*, and six torpedo boats. At this occasion the only drinking water tank on the island was destroyed, and the Italians were forced to retreat one day later. Thus the third attack hit the already abandoned island, being carried out by *Helgoland*, *Saida*, *Balaton*, *Csepel*, *Tátra*, *Velebit*, *Dinara*, and nine torpedo boats. During this operation, A-H torpedo boat *51 T* was damaged by a torpedo fired from the French submarine *Papin*. The torpedo boat lost her bow but remained afloat and was towed to repairs to Rogoznica. *Tátra* took allegedly part at the unsuccessful raid into the Otranto Straits on 23 September, to return to Pula again, where her port turbine was replaced.

On 22/23 November, *Tátra* took part at another sortie into the Otranto Straits, together with *Saida*, *Helgoland*, and other five vessels of the class, but the A-H warships made no contact with Italian destroyers *Ardente*, *Impetuoso*, *Indomito*, and the torpedo boat *Airone*, sent to intercept them. During this raid, *Tátra* sank Italian steamer *Palatino*, and *Triglav* the sailing ship *Gallinara*. Another raid by the same force followed on 5/6 December, but no targets were found.

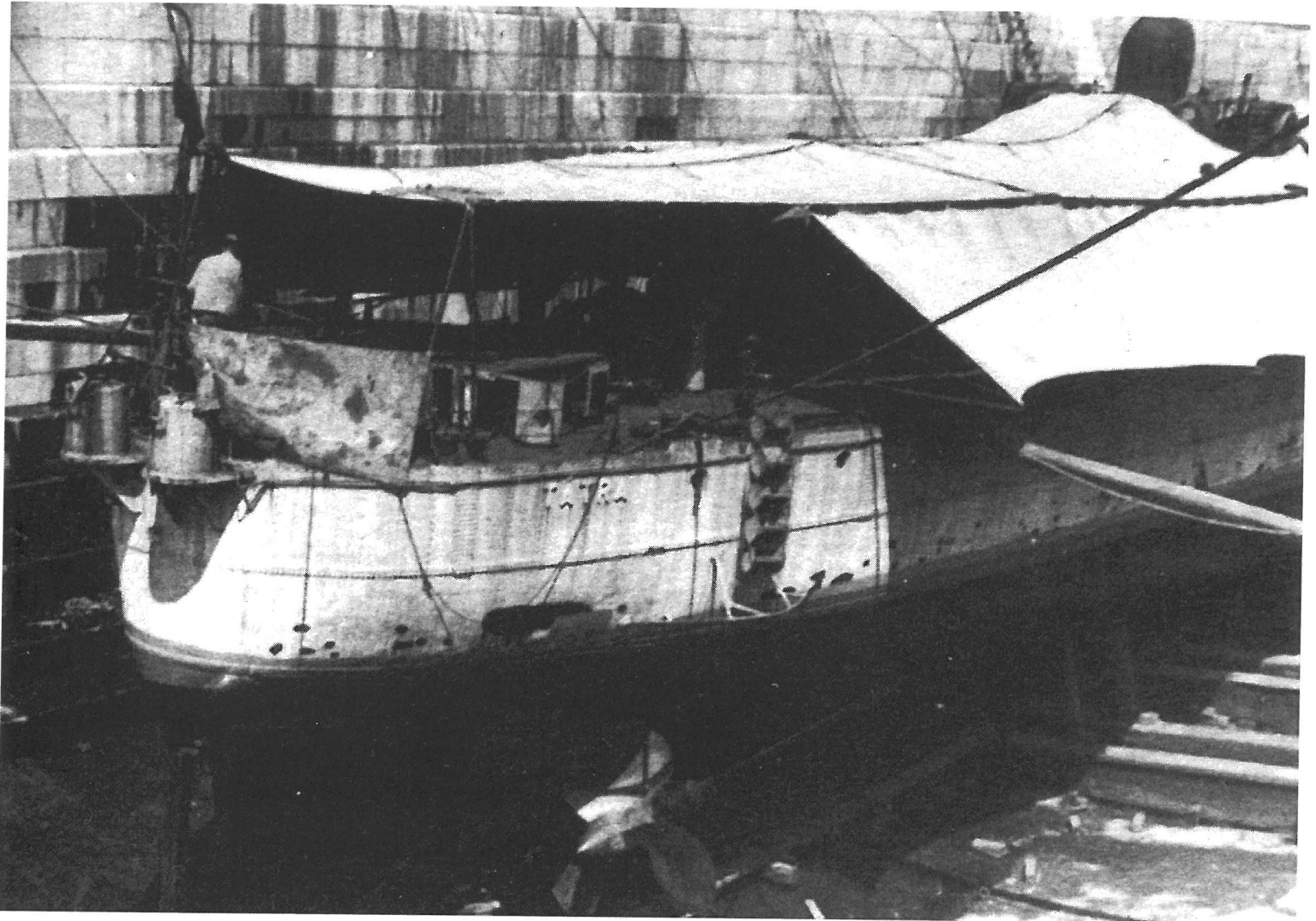
On 29 December 1915, the cruiser *Helgoland* sailed out from Boka, to attack the harbor of Durazzo, escorted by *Tátra*, *Balaton*, *Csepel*, *Lika*, and *Triglav*. Already in front of Boka, *Helgoland* ran over French submarine *Monge* that

was damaged by shells from *Balaton* as well and sank. During the attack on Durazzo, *Lika* and *Triglav* run into a minefield in front of the harbor. *Lika* sank immediately, and *Tátra* took over some of the crew from *Triglav* and tried to tow the damaged consort from the dangerous zone. *Balaton* took the tow over, but was forced to abandon the heavily damaged *Triglav*, as a strong Entente force appeared on the scene, comprising British cruisers *Dartmouth* and *Weymouth*, the Italian *Quarto* and *Nino Bixio*, French destroyers *Casque*, *Commandant Bory*, *Renaudin*, *Commandant Lucas*, and the Italian *Abba*, *Nievo*, *Mosto*, and *Pilo*. The A-H warship made the escape over the Adriatic, at first to the Italian coast, and then back to Šibenik. Several A-H ships steamed from Boka to help, including the armored cruiser *Kaiser Karl VI*, the ironclad *Budapest*, cruisers *Novara* and *Aspern*, destroyers *Huszár* and *Warasdiner*, and three torpedo boats, thus the enemy finally retreated. On *Tátra* suffered a malfunction of the port turbine again, and was forced to sail to Šibenik alone, arriving there after midnight of 30 December 1915. During 1915, she took part in nine minesweeping and ten convoy operations.



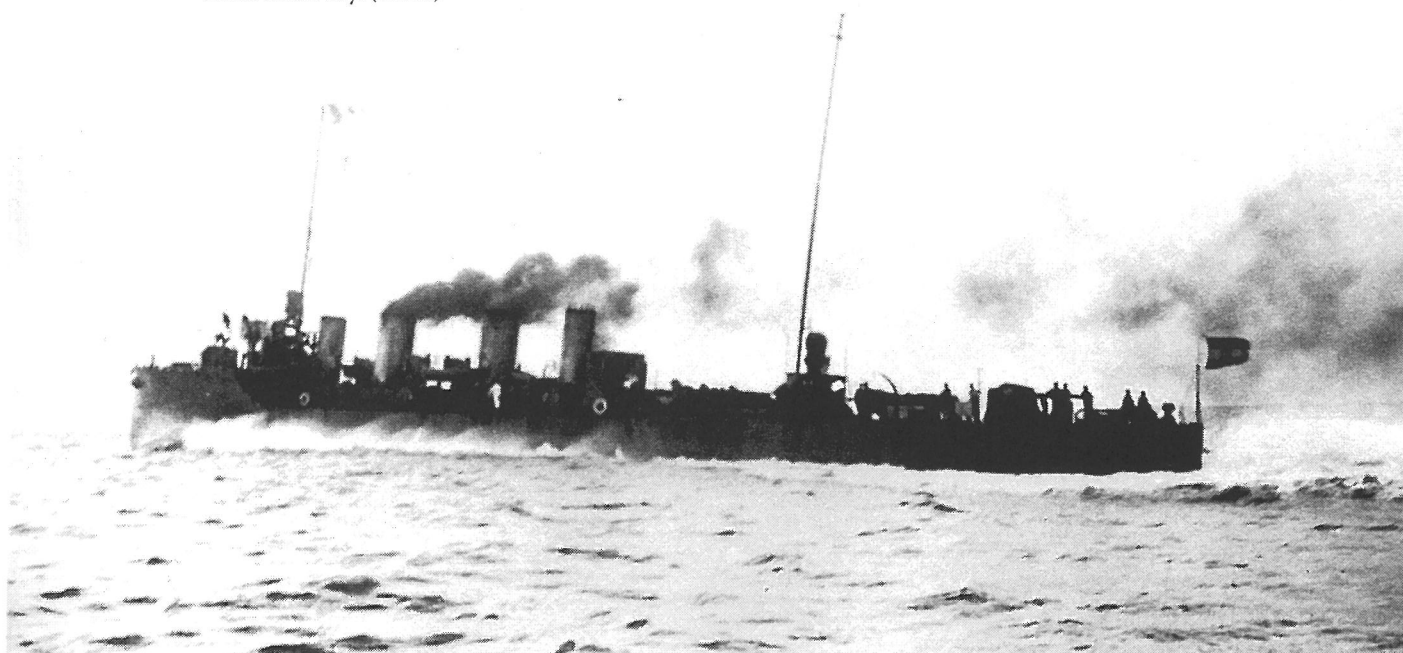
Italian destroyer *Antonio Mosto* of the *Pilo* class was one of the pursuers of A-H warships during the battle on 29/30 December 1915. These warships with 850 tonnes were similar to the *Tátra* class and were armed with six 3in guns and four torpedo tubes. (Rastelli)

On 1 January 1916, *Tátra* was sent to be repaired in Pula, and during trials off Sv. Ivan na pučini on 22 April, she was attacked by an enemy submarine, but the torpedo passed aft. After the repairs were completed, she was sent with *Csepel* to support the A-H seaplanes attacking Brindisi on 2 May, and later she was escorting convoys to and from Durazzo. On 24 June, she towed damaged German submarine *UC 24* (a.k.a. *Ub. 18*) to Đenovići, and on 4/5 July, she took part at the raid to the Otranto Straits with *Helgoland*, *Orjen*, *Balaton*, and three torpedo boats, but no enemy vessels were sighted. As she was supporting A-H seaplanes attacking Valona on 15 August (together with *Balaton*, and torpedo boats *83 F*, *85 F*, and *87 F*), she towed the damaged seaplane *L 87* to Đenovići. Later she was escorting convoys again, and between 31 October and 31 December 1916, there followed turbine repairs with a replacement of several boilers in Pula.



Stern of *Tátra* during docking in Pula. (Greger)

On 5 January 1917, *Tátra* was transferred from Pula to Boka to escort more transport vessels. The planned attack on Brindisi on 24 January (with *Saida* and *Csepel*), to lure enemy warships into a minefield laid by German submarine *UC 22* (alias *Ub. 62*), was cancelled because of a strong southern gale. Later she was supporting A-H seaplanes and escorted other convoys again, and on 11/12 March, she took part at another sortie into the Otranto Straits (with *Csepel*, *Orjen*, and *Balaton*), but again no targets were found. French submarine *Gorgone* sighted this force, but her CO was not sure if they were enemy and has not going to attack. In the meantime KK Alois Ulbing took *Tátra* over as her new CO. On 25 April, *Tátra*, *Csepel*, and *Balaton* made a sortie to the Otranto Straits, as some vessels were reported there, but again in vain. In the night of 28/29 April, *Tátra* attacked French submarine *Arethuse* off Ulcinj, but neither her artillery fire not a ramming attack brought results. In the night of 5/6 May, *Tátra* was sent with *Csepel* and *Balaton* into the Otranto Straits again, but no enemy transport vessels were found. After the force of three A-H light cruisers was returning from the raid at the Otranto Barrage on 15 May, being hotly pursued by strong Entente naval forces, *Tátra* was sent to help, together with the armored cruiser *Sankt Georg*, the destroyer *Warasdiner*, and torpedo boats *84 F*, *88 F*, *99 M*, and *100 M*. She returned to Pula on 26 May, with other boilers being replaced there. After being docked as well, she returned to Đenovići on 16 August, to escort more convoys.

Tátra underway. (PPMI)

Together with *Balaton*, *Orjen*, and *Csepel*, *Tátra* was sent to the Otranto Straits on 21/22 September, but still no targets were found; when returning, the destroyers were sighted by the French submarine *Le Verrier* that was too far away for an attack. On 18/19 October, *Tátra* sortied with *Helgoland*, *Orjen*, *Balaton*, *Csepel*, *Lika* (II), and *Triglav* (II) to the Otranto Straits, but no enemy ships were sighted there, nor along the Italian coast. On 30 November, *Tátra* was sent with *Orjen*, *Csepel*, and *Lika* (II), to support the A-H seaplanes, throwing flyers over Monopoli and Mola. The next raid into the Otranto Straits (with *Balaton* and *Csepel*) followed on 13 December, and four enemy destroyers (probably the Australian vessels *Yarra*, *Huon*, *Warrego*, and *Parramatta*) were encountered. *Tátra* launched at them one torpedo that was not even sighted by the enemy. During another seaplane support mission on 20 December (together with *Balaton*, *Csepel*, and *Orjen*), *Tátra* was towing back the damaged flying boat *K 206* that later capsized and was to be sunk³⁵. During 1917, *Tátra* escorted a total of 22 convoys, and was seven times supporting seaplanes returning from their attacks.

Early in 1918, *Tátra* was stationed in Boka kotorska, with her crew hoisting the red flag on 1 January, as a support of the sailors rebelling on *Sankt Georg* and the depot ship *Gäa*. Her CO, KK Marijan Polić³⁶, placated the crew that gave up the rebellion after the ironclad *Kronprinz Erzherzog Rudolf* was fired at by the loyal coastal batteries on 2 February, and one of the mutiny leaders was killed. Finally, during the afternoon and evening of 2 February, the cruisers *Novara* and *Helgoland* together with the destroyers *Tátra*, *Huszár*, *Warasdiner*, *Dinara*, *Balaton*, *Orjen*, *Csepel*, and five torpedo boats left the dangerous zone near the armored cruisers and went through the Verige Straits to the secure inner Bay of Morinje. The Command of the 1st Torpedo Flotilla warned the mutineers that all ships trying to follow them would be sunk. Later followed the ultimatum that that all rebel ships will be sunk if not surrendering by 1000 hours on 3 February. The 3rd Heavy Division (with battleships of the *Erzherzog* class) was also underway from Pula to quell the mutiny, and some of rebel leader escaped with a seaplane to Italy, and the others gave up. Over 800 sailors were

³⁵ According to SIECHE, *Zeittafel 1917*, p. 135; according to SCHUPITA, *Seeflieger*, p. 110, this occurred already on 9 December 1917.

³⁶ Marijan Polić (1876-1958) left Pula with the battleship *Zrinyi* on 10 November 1918, already after the city was taken over by the Italians, sailing to Split, where the ship was seized by the Americans on 22 November. After the war, Polić served with the Royal Yugoslav Navy, being promoted to Rear-Admiral in 1935.

removed from the ships, and 392 came before the military tribunal; four (Antun Grabar, Jerko Šižgorić, Mate Brničević, and František Raš) were found guilty, to be executed on 11 February. On 17 October, 348 sailors were pardoned by the Emperor Karl, and as the war ended, all others were set free as well. After the mutiny, *Tátra* was attacking again the enemy coastal traffic. On 6 April, she sortied from Đenovići with *Novara*, *Csepel*, and *Orjen*, to attack targets on the Cape Gargano and in Pesara, and the force returned afterwards to Pula. There followed some exercises in the Bay of Rijeka on 1/2 June, and the destroyer moved to Boka on 7 June, in scope of preparations for the raid at the Otranto Barrage. After the loss of *Szent István* on 10 June (see under *Velebit*), she returned to Pula, escorting together with *Uzsok*, *Orjen*, and *Balaton* the battleships *Viribus Unitis* and *Prinz Eugen* from Đenovići over Slano back to the central naval harbor.

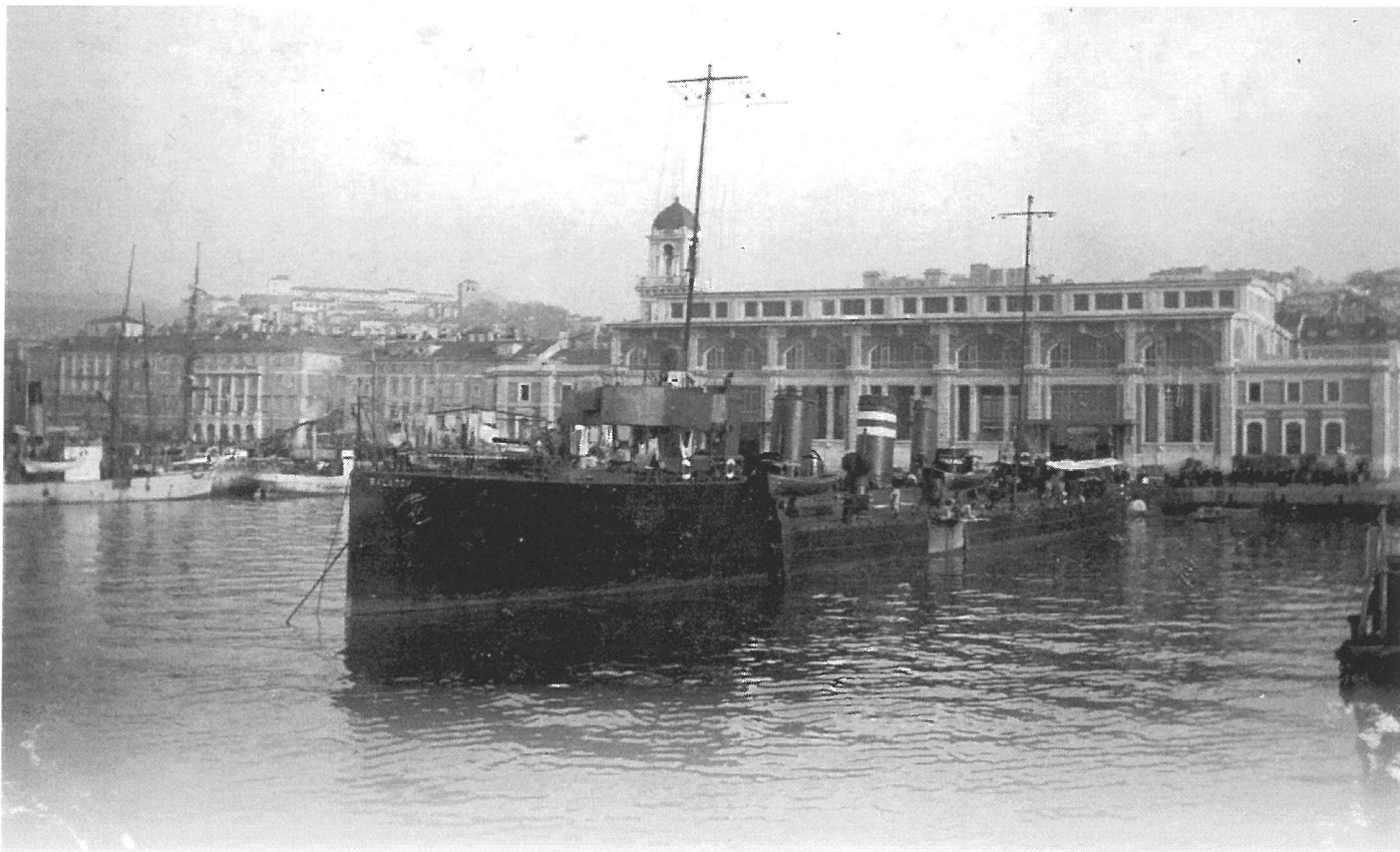


Seamen aboard a *Tátra* class destroyer. (Pawlik)

Tátra was escorting several more convoys, and was hunting for submarines, to be sent with *Orjen* from Pula to Boka on 2 October, as a reinforcement after the Allied attack on Durazzo (see under *Scharfschütze*). She was laying mines in front of Durazzo on 7 October, protected some A-H transport vessels during the evacuation from Durazzo on 10 October (together with *Helgoland*, *Novara*, *Lika* (II), *Dukla*, *Orjen*, *Uzsok*, and *Csepel*), and on 13 October, she covered the steamer *Oceania* stranded off the Cape of Rodon after being damaged by a mine. *Tátra* left Boka on 30 October 1918, with Commodore Seitz aboard, and went to Pula, where the A-H fleet was handed over to the National Council of the S. H. S. State on 31 October. During 1918, *Tátra* escorted 16 convoys, and was once supporting A-H seaplanes. The Croatian flags were removed soon from the vessels in Pula, being replaced by Italian ensigns, and *Tátra* was towed to

Venice on 23/24 March 1919, to take part at the Victory Parade. She was officially ceded to Italy on 27 September 1920 and renamed *Fasana*. Due to her general poor condition, she was not commissioned, but towed by the tug *Marettimo* back to Pula on 16 October 1920, to serve as a source of replacement parts for other ships of the class commissioned for the Italian navy. She was finally stricken on 5 July 1923 and scrapped.

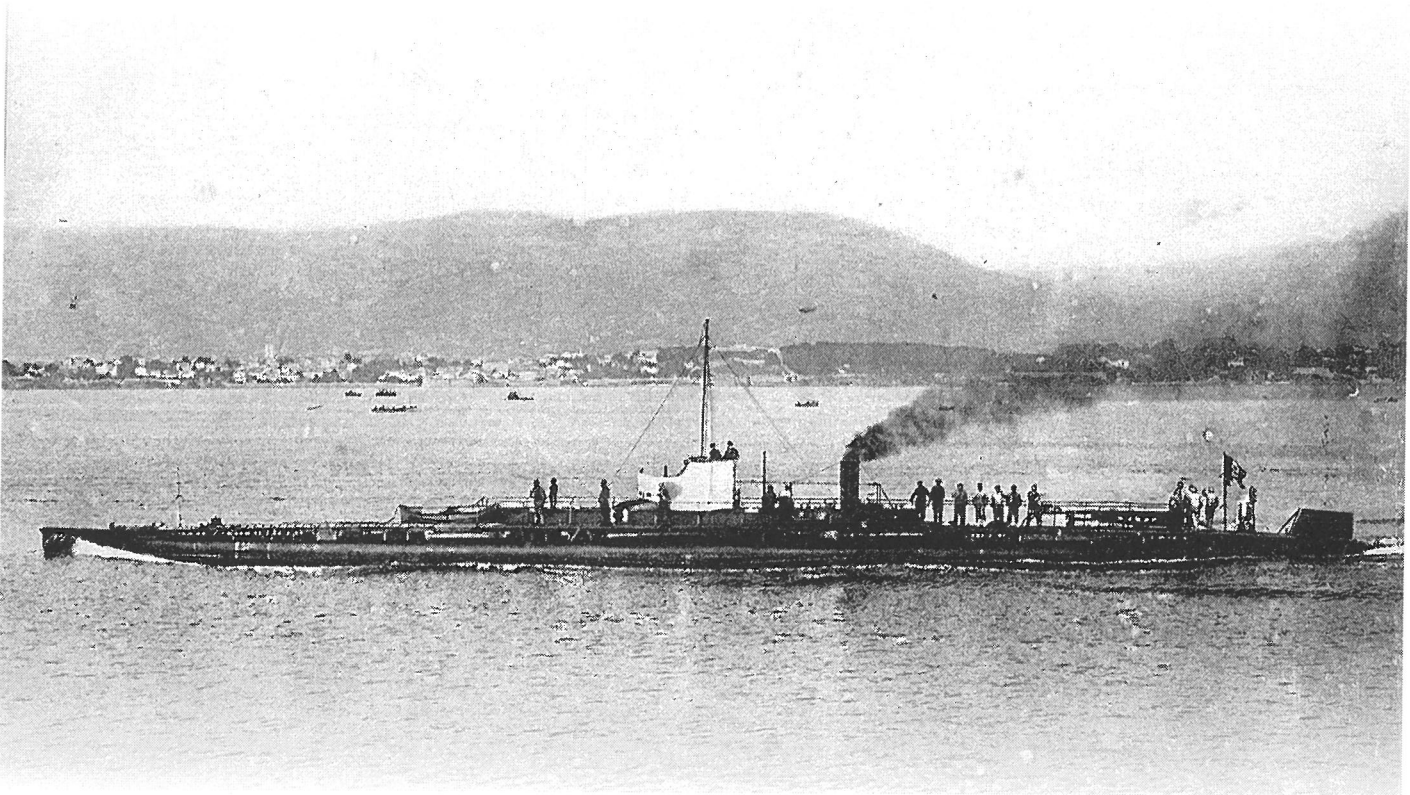
BALATON was commissioned on 1 August 1914, under KK Kajetan Pulciani von Glücksberg as her first CO. On 13 August, she took part with *Velebit*, *Triglav* (I), and Csepel at the rescue of survivors from the passenger steamer *Baron Gautsch*, lost by a mine off Rovinj, after entering the newly laid minefield off Pula.



Destroyer *Balaton* in Trieste. (Wikipedia)

Balaton was transferred to Šibenik on 14 September, was scouting on the line between Palagruža and Bari on 12 October and returned to Pula on 18 October. On 2 November, she was again deployed to Vis, with the cruiser *Helgoland* and other ships of the 1st Torpedo Flotilla, as the French fleet appeared there, and on 21 December, she searched with the 1st Torpedo Flotilla for the French armored cruiser *Jules Michelet*, waiting near Palagruža for the French submarine *Curie* (being lost one day earlier at the entrance of the Pula harbor). As the flotilla was returning on 22 December, one French submarine attacked *Balaton* with a torpedo that missed. From 5 January 1915 onwards, the destroyer was with the 1st Flotilla in Pula, on 21 January in Šibenik, and later in Boka. She steamed with *Helgoland* and other ships of the Flotilla from Šibenik on 18 February, to a patrol off the Otranto Straits; afterwards the force returned to Šibenik, and to Pula on 23 February. Another raid of the flotilla to the Otranto Straits followed between 10 and 12 April, but again no targets were found. *Balaton* was not taking part at the fleet attack on the Italian coastal cities on 24 May 1915 but was escorting the A-H submarine *Ub. 6* to Vis on 30 May instead and towed the German submarine *UC 12* (alias *Ub. 24*)

from Pula to Boka on 19 July. In the meantime, on 5 July, she was laying mines off Cape Gargano with the 1st Flotilla. On 28 July, there followed the already mentioned unsuccessful attack with the landing of a sailors detachment from vessels of the 1st Flotilla on Palagruža (see under *Tátra*), and on the way back she was attacked (without success) by the French submarine *Ampère*, laying in ambush near the island. The 1st Torpedo Flotilla attacked Palagruža on 17 August again (see under *Tátra*) and destroyed the only water cistern on the island, thus the Italians evacuated their garrison one day later. Next attack of the Flotilla followed on 9 September, and hit the already abandoned island, and until the end of the war, there was no garrison left on Palagruža, as its supply would bind large forces. On 22/23 November, there followed another sortie of the 1st Flotilla to the Otranto Straits and along the Italian coast, with the next one on 5 December (see under *Tátra*). *Balaton* sailed from Boka on 29 December 1915, together with *Helgoland*, *Csepel*, *Tátra*, *Lika*, and *Triglav*, to attack Durazzo, where *Lika* and *Triglav* were lost. Her CO at this time was KK Franz Morin. *Balaton* took part in sinking of the French submarine *Monge* in front of Boka (see under *Tátra*), rescuing afterwards one French officer and 15 crew members. The French submarine CO, LV Roland Morillot, went under with his boat. After the loss of *Lika*, *Balaton* was towing the damaged *Triglav*, but was finally forced to abandon her consort. She returned with other ships of the force to Šibenik, and later to Pula, with repairs being completed on 11 February 1916.



French submarine *Monge* of the *Pluviôse* class (398/550 tonnes, six torpedo launching cradles, crew of 24) was rammed by *Helgoland* and later sunk by *Balaton*. (Rastelli)

On 23 February 1916, *Balaton* was sent with *Csepel* and *Orjen* to another attack on Durazzo, but the vessels were forced to return to Đenovići by a strong gale. The same occurred on 24 February. Another raid of the 1st Flotilla (with *Helgoland*, *Balaton*, *Csepel*, *Orjen*, *Turul*, *Huszár*, and *Wildfang*), to disrupt the enemy retreat from there, followed on 26/27 February, but the enemy has already abandoned Durazzo, and A-H warships missed the enemy force. On 7 March, *Balaton* and *Orjen* technical personnel landed in Durazzo, to make the harbor fit for use again. On 14 March, both destroyers escorted from Shëngjin to Durazzo the repair ship *Cyclop* with one lighter

in tow, with a load of two 15 cm (5.9in) guns from the old cruiser *Franz Joseph I*, together with ammunition and a dismantled seaplane hangar. The guns were offloaded, but *Cyclop* was unable to enter harbor because of mines, and she returned with parts of the hangar to Boka. On 23/24, and again on 26 March, *Helgoland*, *Saida*, *Orjen*, and *Balaton* were searching for the missing submarine *Ub. 24* (the German *UC 12*), that sank after an explosion of her own mine off Taranto already on 16 March. On 1 April, *Balaton* and *Orjen* were looking for a missing lifeboat from the steamer *Andrássy*, sunk by a mine one day earlier, but found no survivors. *Balaton* served later in support of A-H seaplanes during their attacks on Brindisi, Valona, Bari, and Cape Gargano; she went to Šibenik on 27 May, and took part at two more raids into the Otranto Straits: on 31 May, with *Orjen* and three torpedo boats, and again on 4 July, with *Helgoland*, *Orjen*, *Tátra*, and three torpedo boats. On 15/16 August, she helped the salvage of the seaplane *L 87* (see under *Tátra*).

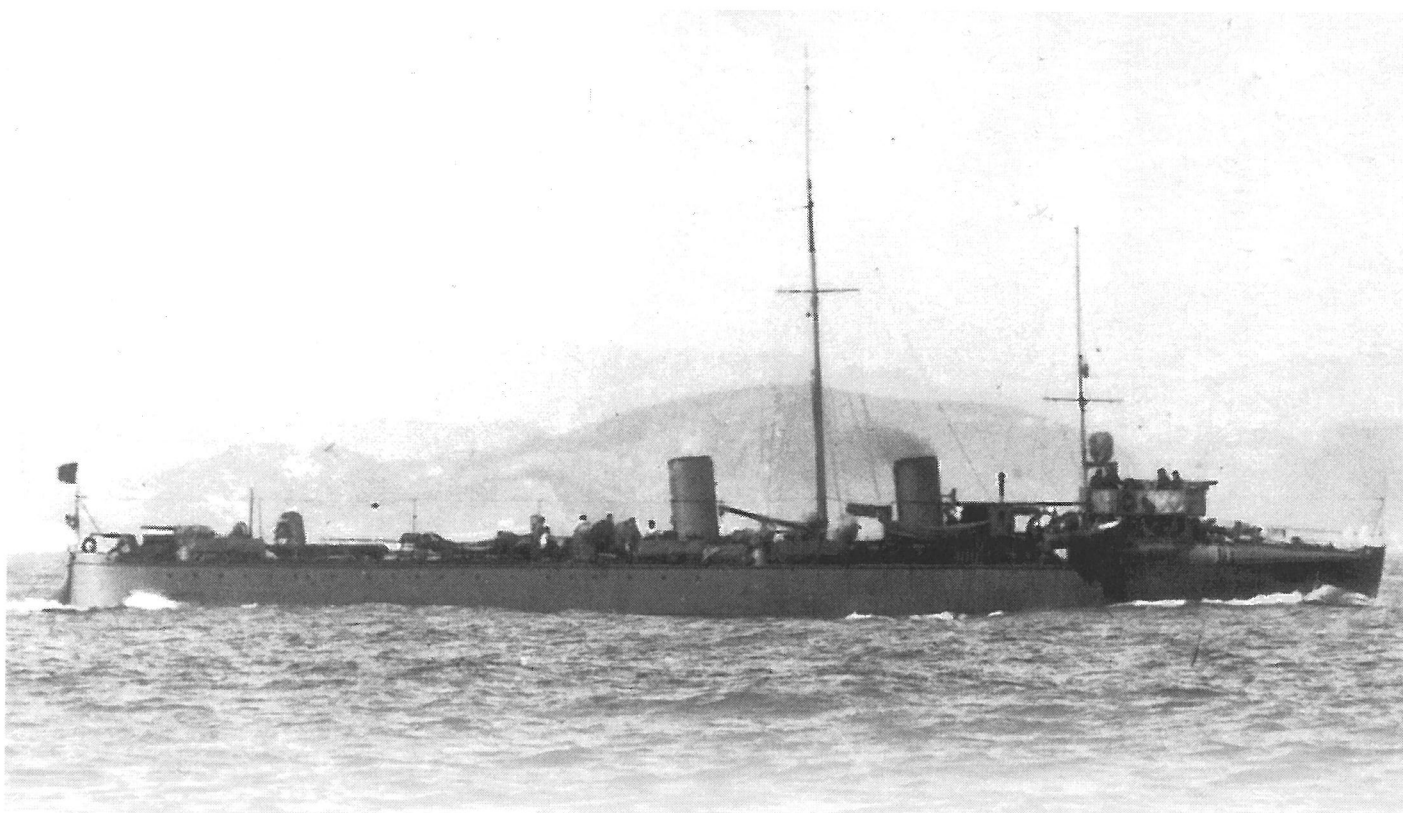


Balaton with other destroyers of the *Tátra* class in winter 1914/15. (Pawlik)

Balaton also took part at the unsuccessful “fleet demonstration” off Brindisi on 28 August 1916, but A-H warships were not sighted at all, and the enemy remained in harbor (see under *Tátra*). On the return trip to Pula, *Balaton* was damaged in a gale on 9 November: she was hit by a “monster wave” and heeled to starboard at an angle of 70° but righted itself. The forward starboard boat with the derrick was torn off, several hatchways covers and skylights over the machinery rooms were broken, and one machine room partially flooded. After being repaired, *Balaton* was sent to Boka on 20 February 1917, to take part at a hunt for enemy vessels between Brindisi and Valona on 11 March (see under *Tátra*). On 24 March, she was again unsuccessfully attacked by an enemy submarine off the Bojana estuary and took part with *Tátra* and *Csepel* at two raids into the Otranto Straits on 25/26 March, and 5/6 May (see under *Tátra*). She was still commanded by KK Morin.

During the raid by three A-H scout cruisers against the Otranto Barrage on 14/15 May 1917, *Balaton* and *Csepel* were sent separately along the Albanian coast to the south, to attack the enemy maritime traffic. On 15 May, they met

a convoy with the Italian steamers *Caroccio*, *Verità*, and *Bersagliere*, escorted by the Italian destroyer *Borea*. *Caroccio* was sunk, other two steamers damaged, and the burning *Borea* sank later. There followed a short skirmish with the Italian leader (*esploratore*) *Aquila* that was left immobile after her boilers were damaged. Two A-H destroyers returned undamaged to Boka, in spite of the presence of the French submarine *Bernouilli* that missed *Balaton* with two torpedoes.

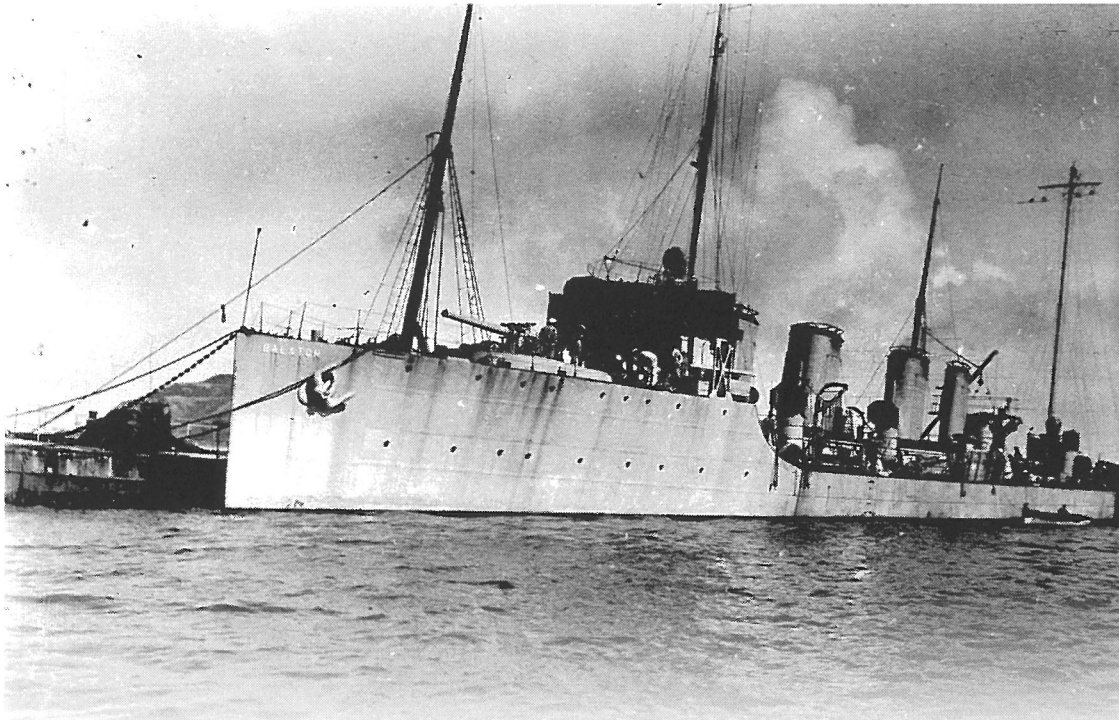


Old Italian destroyer *Borea* of the *Nembo* class (330/386 tonnes, armed with four 3in guns and two 17.7in torpedo tubes) was similar to the Huszár class. The destroyer *Turbine*, sunk near Manfredonia on 24 May 1915, belonged to the same class. (Rastelli)

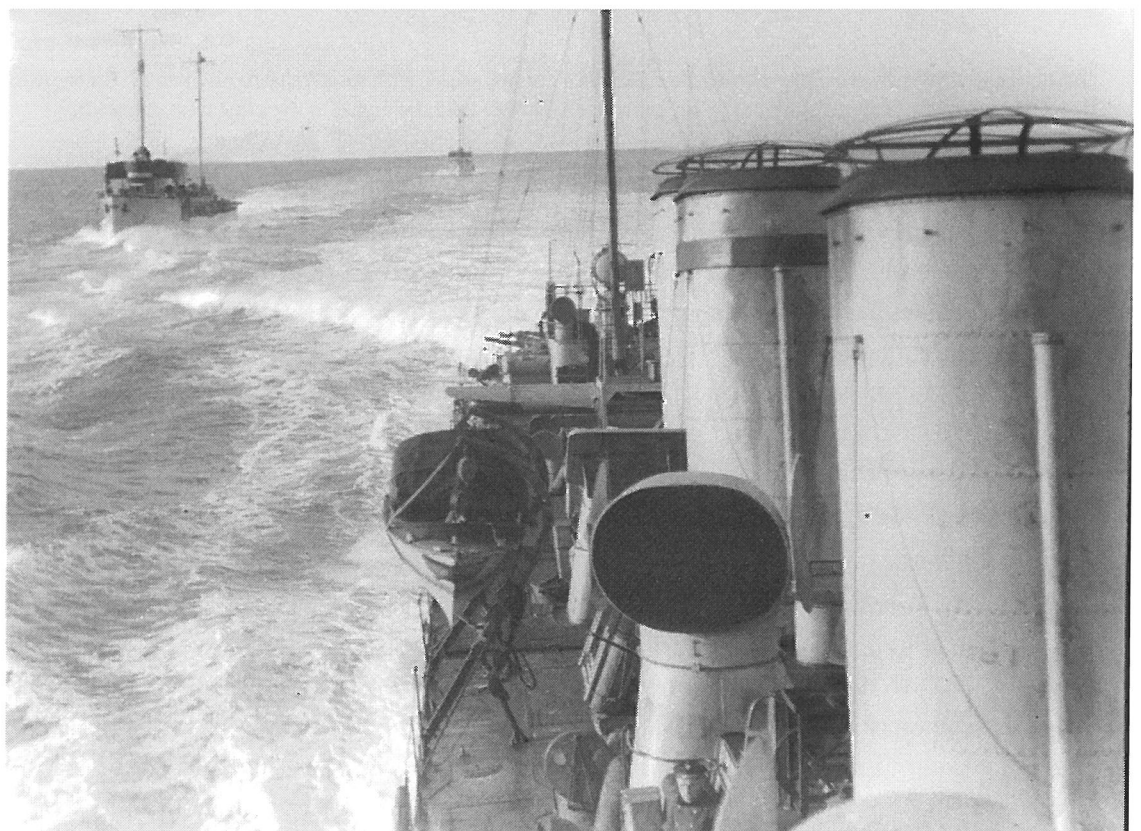
On 11 August, *Balaton*, *Orjen*, and *Ulan* were dispatched to assist A-H seaplanes. On 20 September, *Balaton*, *Tátra*, *Orjen*, and *Csepel* made a sortie into the Otranto Straits, returning one day later to Đenovići (see under *Tátra*). On 27 September, *Balaton* was supporting seaplanes (with *Tátra*, *Csepel*, *Csikós*, and *Warasdiner*), and took part with other vessels at a raid to the Otranto Straits and at an attack against the Italian coast on 18 October, and on 13 December 1917 as well (see under *Tátra*). During 1917, *Balaton* escorted 40 convoys, and was supporting seaplanes six times. Early in 1918, she was stationed in Boka, and raised on 1 February – with the permission of her CO – the red flag in support of the mutineers; the flag was lowered already on 2 February (see under *Tátra*). On 11 February, *Balaton*, *Csepel*, *Huszár*, *Dinara*, and the 10th Torpedo Division were escorting the battleships of the *Erzherzog* class back to Pula.

As the A-H steamer *Linz* - underway to Durazzo - sank near the Cape of Rodon after hitting a mine at 0035 hours on 19 March, *Balaton* rescued the survivors together with torpedo boats 74 and 98. During this action, 98 was attacked unsuccessfully by an enemy submarine with a torpedo. From the sunken vessel with 1003 persons aboard, 342 were salvaged, and 696 drowned (ten Army officers, 265 soldiers, 410 prisoners-of-war, ten crew members, and one nurse). On 8 June, *Balaton* was sent from Pula to Đenovići, to take part with other warships at the attack against the Otranto Barrage vessels, to return to Pula on 11 June, as this operation was cancelled after the loss of *Szent István* (see under *Tátra* as well). On 2 July, she took part with *Csikós* and the torpedo boats 83 and 88 at a support operation for four

A-H seaplanes that attacked the Stabilimento Balneare in Caorle. The A-H ships encountered the Italian destroyers *Orsini*, *Stocco*, *Sirtori*, *Acerbi*, *Audace*, *La Masa*, and *Missori*, and during combat, *Csikós* was heavily, with *Balaton* and the torpedo boats slightly damaged (see under *Csikós*). Her CO at this time was FK Friedrich Ritter Luschin von Ebengreuth, and later in 1918 KK Viktor Ritter von Joly, who at the same time commanded *Dukla* of the *Ersatz Triglav* class during their stay in Boka.



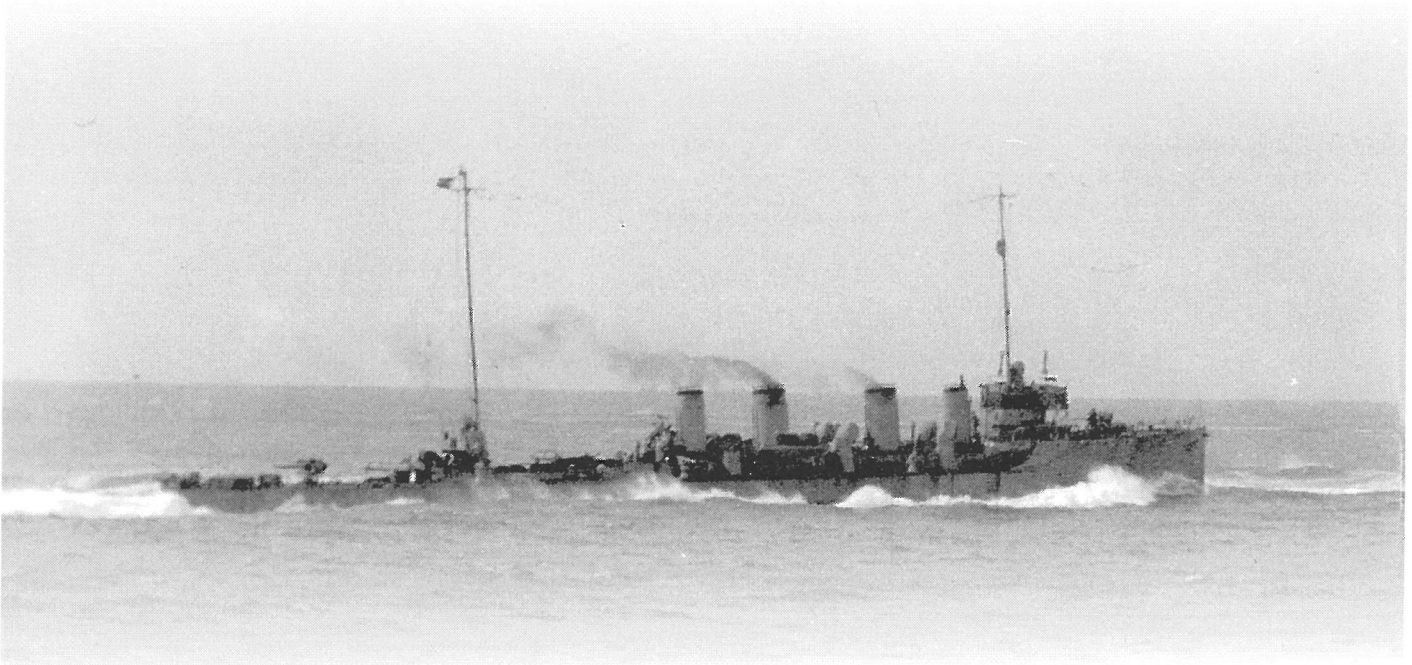
Balaton at her moorings.
(Freivogel)



Destroyers of the *Tátra* class
underway. (Pawlik)

Balaton arrived at Pula for a longer repair on 12 September, but the work was not completed before the war was over. During 1918, she escorted 16 convoys, and was three times supporting seaplanes. She was seized by the Italians in Pula, officially handed over to Italy in 1920, and renamed **Zenson** (after a township where one successful Italian counter-attack on the Piave river was carried-out). Because of her poor technical condition, she was not commissioned and remained in Pula, to serve as a source of replacement parts for other *Tátra* class destroyers in Italian service, until being scrapped in 1929/30.

CSEPEL was commissioned on 29 December 1913, but was provisionally laid up, to be recommissioned again on 4 August, as the leader of the 1st Destroyer (Torpedo Vessel) Group of the 1st Division of the 1st Torpedo Flotilla. First CO of the ship, and of the 1st Group was *FK Janko Vuković Podkapelski*. **Csepel** was one of the ships sent to meet German cruisers **Goeben** and **Breslau** underway to the Adriatic, but this A-H force returned as the Germans went to Turkey instead.

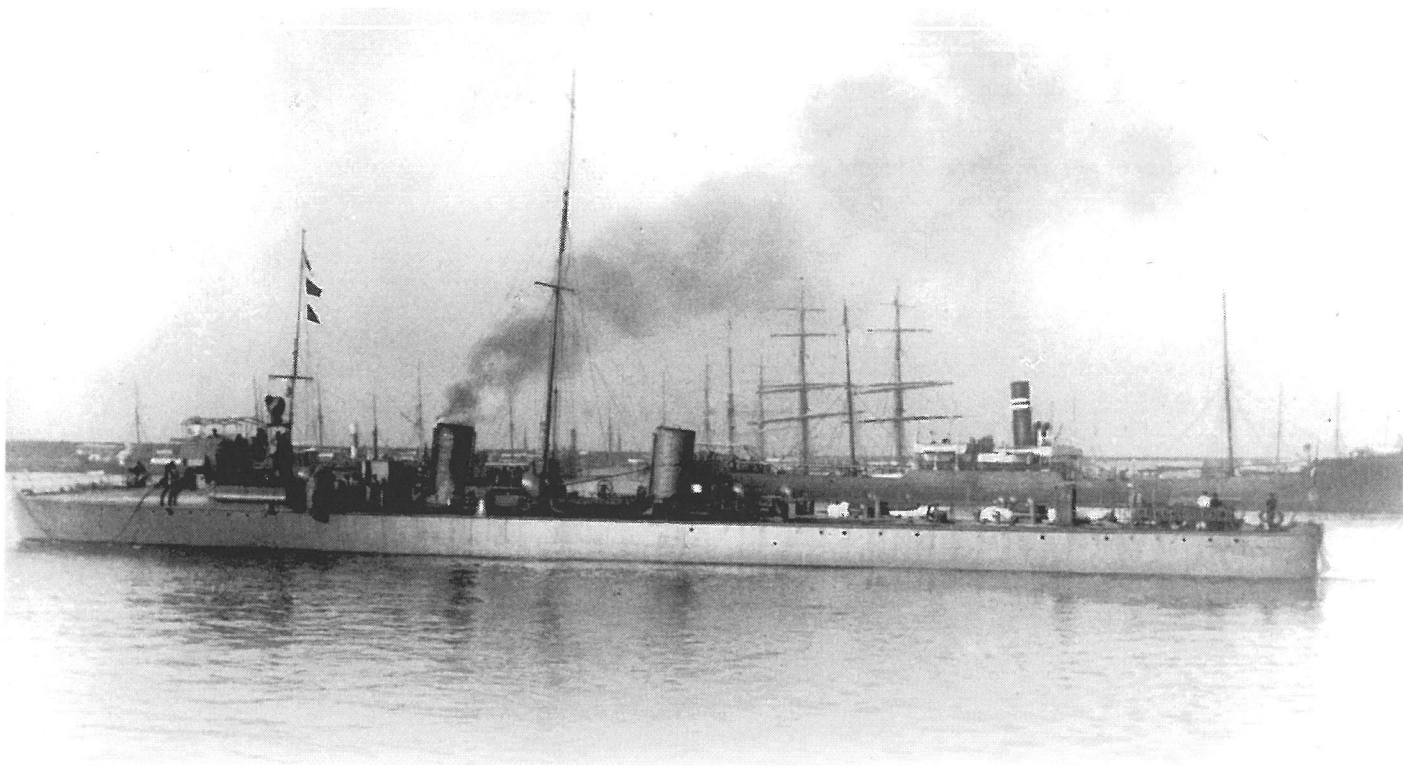


Csepel at sea. (Pawlik)

On 13 August, she took part, together with **Velebit**, **Triglav**, and **Balaton**, at the rescue of survivors from the passenger steamer **Baron Gautsch**, sunk by a mine off Rovinj; she rescued 76 people and salvaged 18 dead bodies. On 14 September, she was sent with the 1st Flotilla to Šibenik, was scouting with other vessels of the Flotilla between Palagruža and Bari, was in Pula from 18 October onwards, and was visited - like some other warships - by the Archduke Karl Franz Joseph, the future Austro-Hungarian Emperor Karl I on 23 October. On 28 October, she was in Šibenik again, and as the French fleet was sighted near Vis, landing sailors who destroyed the Stončica lighthouse, and as French cruisers were attacking Lastovo, the whole 1st Flotilla sailed from Šibenik on 2 November, but could not engage the enemy who retreated to the south. **Csepel** returned afterwards to Pula for turbine repairs and remained in the Arsenal between 27 November and 11 December. She was in Šibenik again on 13 and was scouting off Palagruža on 22 December 1914.

From 5 January 1915 onwards, **Csepel** was in Pula, where her boilers were cleaned, and one anti-aircraft machine-gun installed on the wireless cabin roof. Later she returned to Šibenik, to sail on 18 February (with **Helgoland**,

other five destroyers of the 1st Division, and torpedo boats *75 T*, *76 T*, and *56 T*) to a night raid in the Otranto Straits, but no enemy vessels were sighted. The force returned over Šibenik to Pula, and *Csepel* was searching off Split for enemy submarines on 16 March. The next raid of the same force into the Otranto Straits followed on 10/11 April, but again no enemy ships were met. During the docking time in Pula from 8 to 12 May, *Csepel* received her new propellers, and was later sent to patrol in the South Adriatic with other ships of the Scouting Group G (*Helgoland*, *Tátra*, *Lika*, and *Orjen*). The crisis with Italy became more serious, and war was expected every day.

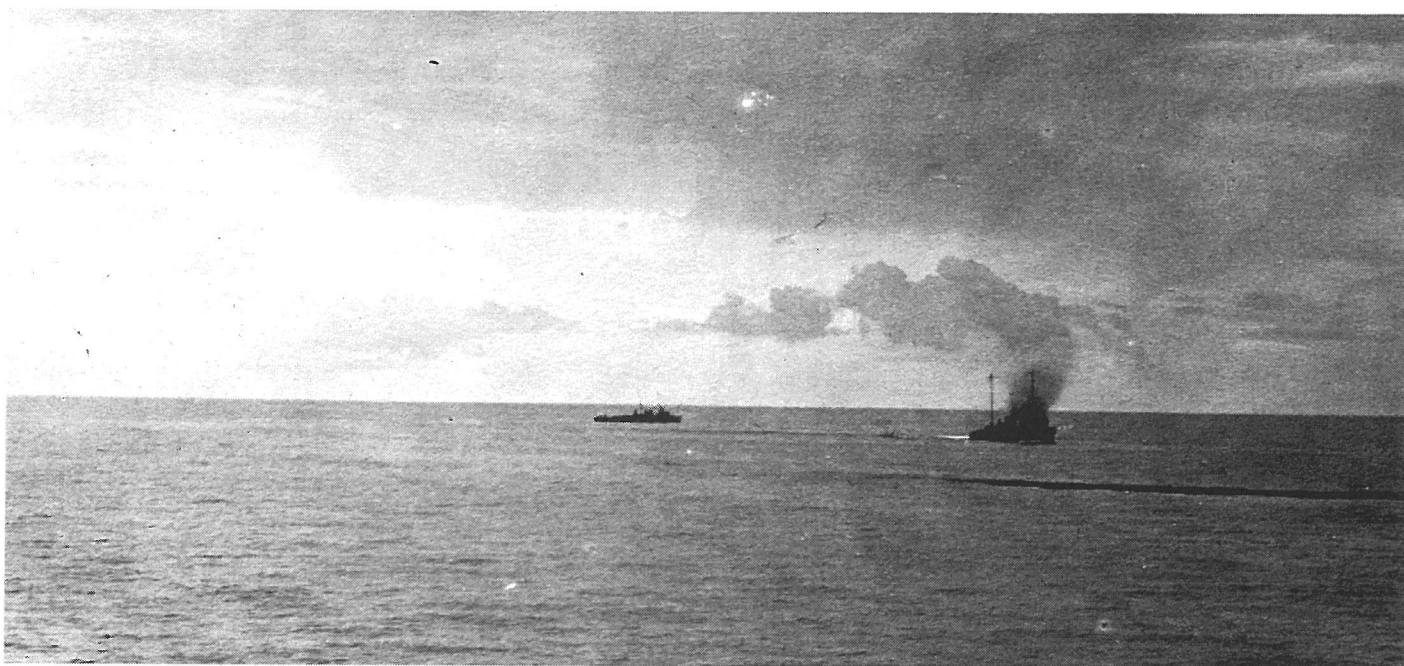


Italian destroyer *Turbine*, being sunk by A-H warships on 24 May 1915. (Rastelli)

Italy declared war on Austria-Hungary on 23 May, and already in the early morning hours of 24 May, the whole A-H fleet was underway shelling Italian coastal cities. After a scouting mission in the south, the Scouting Group G shelled railroad stations in Barletta (by *Helgoland*) and Manfredonia (by *Csepel* and *Tátra*), to meet afterward the small Italian destroyer *Aquilone* who managed to escape. Shortly thereafter, the A-H group met the small destroyer *Turbine* (CC Bianchi) that tried to flee from *Helgoland*, encountering *Csepel* and *Tátra*, and being finally intercepted by *Lika*. She was rapidly sunk, and *Csepel* was damaged with only one shell, hitting her mast, with three wounded under her crew. She rescued one Italian officer and 13 sailors from the sinking destroyer.

From 22 June onwards, *Csepel* was stationed in Pula, and was laying mines off Cape Gargano with other vessels of the flotilla on 5 July. The Italians reported to having sighted three *Erzherzog* class and two *Habsburg* class battleships at this occasion (!). A new raid of the 1st Flotilla against the Italian coast followed on 22/23 July, and against the occupied Palagruža in the early morning hours of 28 July (see under *Tátra*), as two members of her crew – when taking part at the landing – were wounded. Next attacks on Palagruža followed on 17 August and 9 September, after the island was already abandoned (see under *Tátra*). There followed the other already mentioned raids into the Otranto Straits on 23 November and 5 December. On 29 December, *Csepel* (already under command of FK Maximilian von Hilscher) took part at the ill-fated attack on Durazzo (the “Battle between the Cape of Rodon and Cape Gargano”). After leaving Boka,

Helgoland and *Balaton* sank the French submarine *Monge* (with *Csepel* rescuing afterwards seven French sailors), and *Lika* and *Triglav* hit some newly laid mines off Durazzo. *Lika* sank almost immediately, and *Csepel* tried to tow the damaged *Triglav* to safety, but the towing rope fouled her starboard propeller, and the tow was taken over by *Balaton*, until a strong enemy naval force appeared on the scene, and *Triglav* was to be abandoned. *Csepel* was steaming alone, at times with only one propeller in service and with her speed reduced to 28 knots, but still reached Šibenik on 30 December 1915. She was repaired in Pula from 4 to 16 January 1916, arrived at Boka again on 26 January, and was to attack Durazzo with *Novara* and *Orjen* on 27 January. As the force left Boka, two destroyers collided during a message delivery from ship to ship, were both heavily damaged and sent to repairs. *Csepel* was docked in Boka from 2 to 12 February and was sent with *Orjen* and *Balaton* to Durazzo on 23 February, to attack some enemy cruisers sighted there, but the operation was cancelled because of a strong southerly wind (Scirocco). On the following day, Italian destroyers and auxiliary cruisers could undisturbedly shell the A-H Army positions north of Durazzo, being covered from the sea by Italian battleships *Regina Elena* and *Napoli* with the cruiser *Marsala*. Between 3 March and 20 April 1916, *Csepel* was overhauled in Pula, to return at Boka on 21 April.



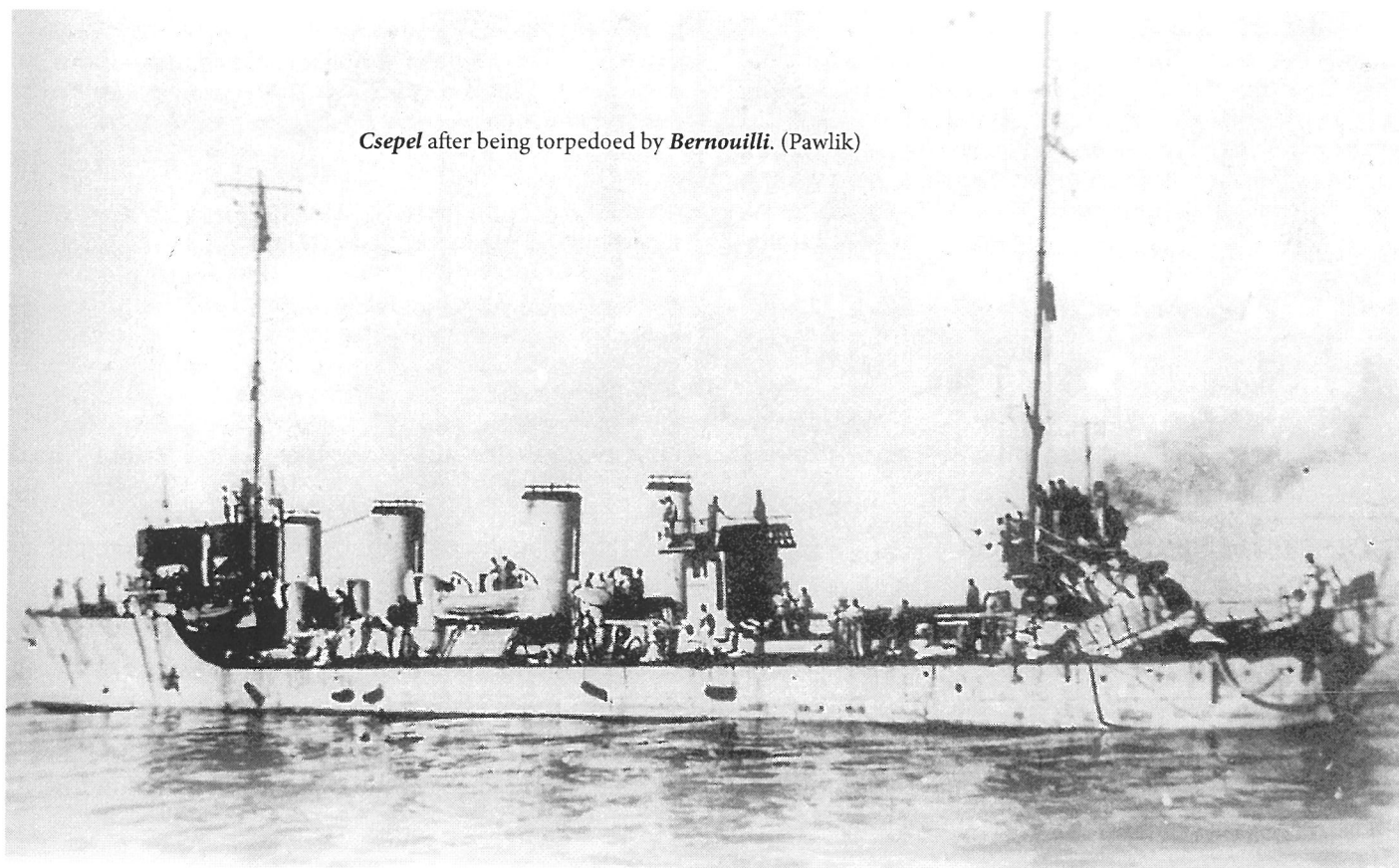
Turbine (left) being sunk off the Italian coast on 24 May 1915; on the right side *Lika* could be seen. (Greger)

On 2 May, *Csepel* sailed with *Tátra* to support a mission of A-H seaplanes, and on 4 May, she was waiting together with *Balaton* for seaplanes returning from an attack on Valona but was at 1430 hours south from Cape Veslo torpedoed by French submarine *Bernouilli* (LV Jules Audry).

The stern of the destroyer was cut-off by the explosion up to the aft bulkhead of the aft machinery room, but all other bulkheads were holding, and the ship remained afloat. Thirteen crew members perished, three were seriously and six lightly wounded. The destroyer *Warasdiner* took part at the salvage, together with torpedo boats *81 T*, *53 T*, *83 F*, *87 F*, *88 F*, the old destroyer *Blitz*, auxiliaries *Gigant* and *Pluto*, and old torpedo boats *15*, *30*, and *36*. The damaged *Csepel* was towed to Boka and put into floating dock *III*. After being provisionally repaired, she was towed alongside the steamer *Meran* to Kraljevica between 13 and 16 May, to be repaired there with a new stern, modelled after the stern shape of the *Ersatz Triglav* class. *Csepel* was launched again on 6 August, and towed to the Danubius shipyard in Rijeka, where the works were completed on 29 August.

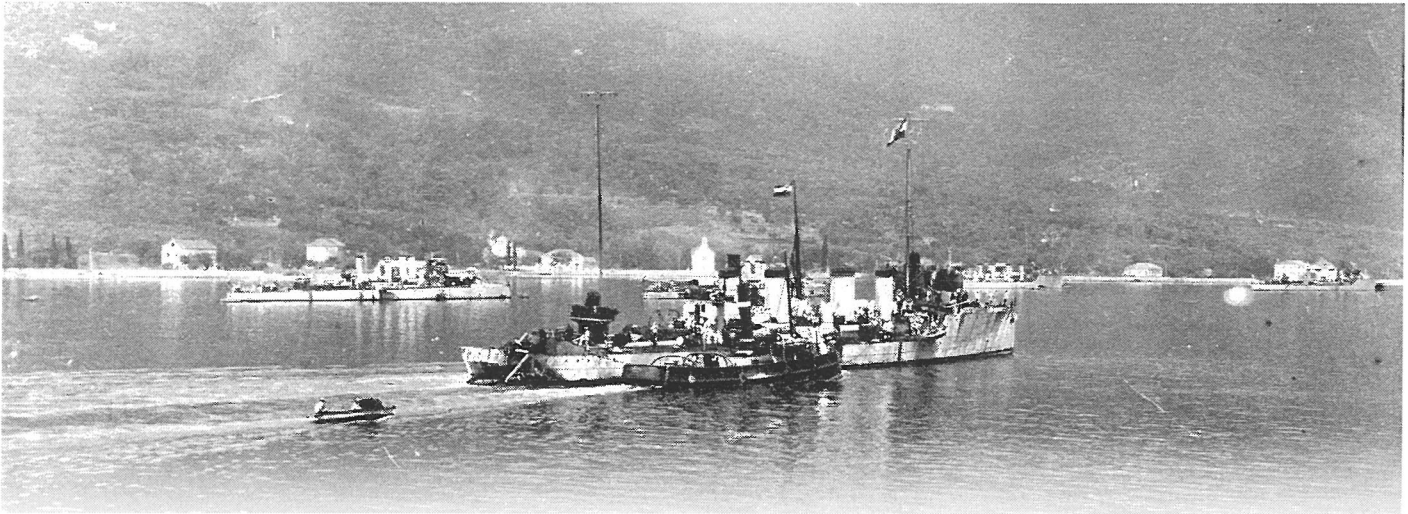


Launching of French submarine *Bernouilli* of the *Brumaire* class (387/551 tonnes, diesel propulsion, one torpedo tube and six launching cradles, crew of 29). (Rastelli)

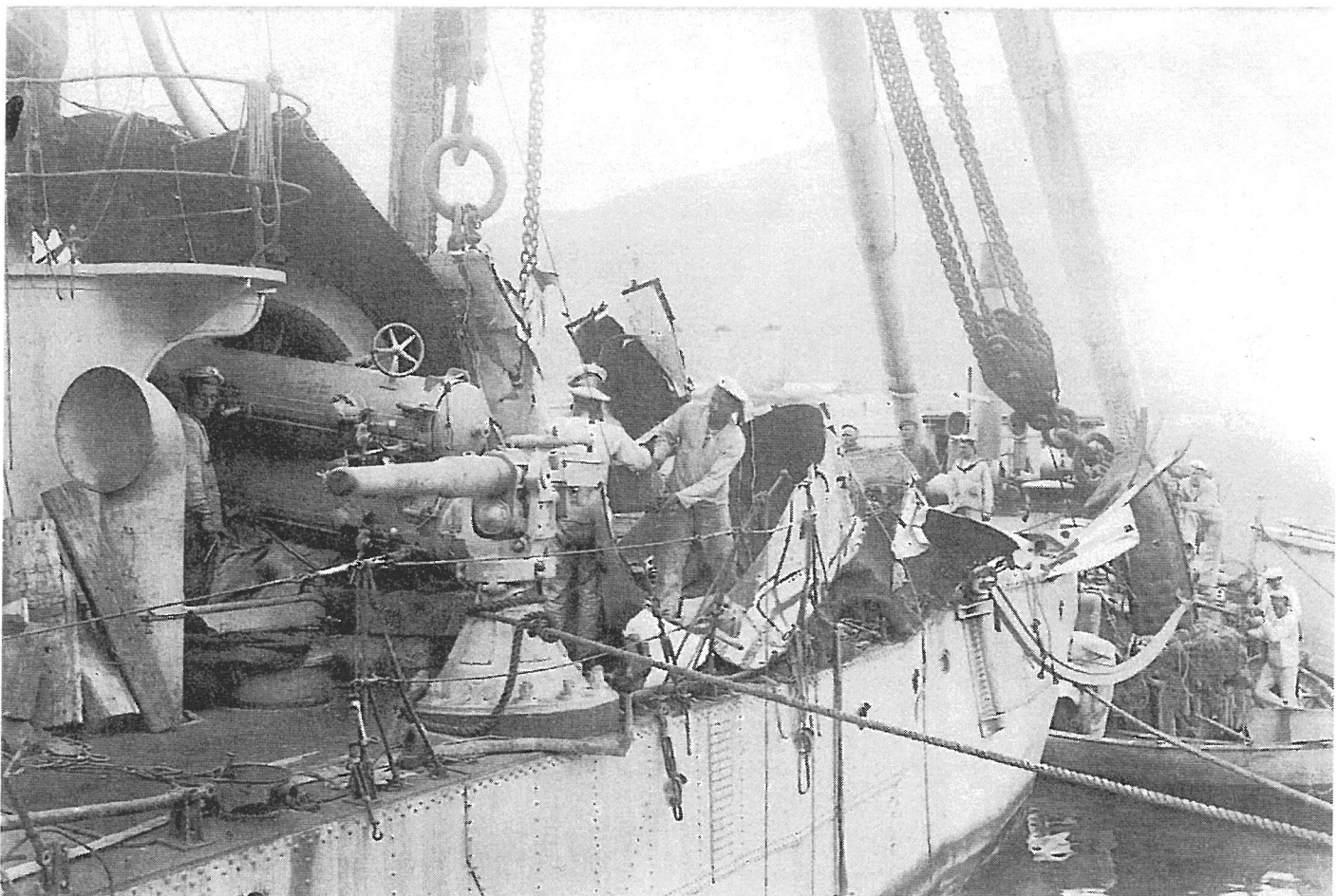


Csepel after being torpedoed by *Bernouilli*. (Pawlik)

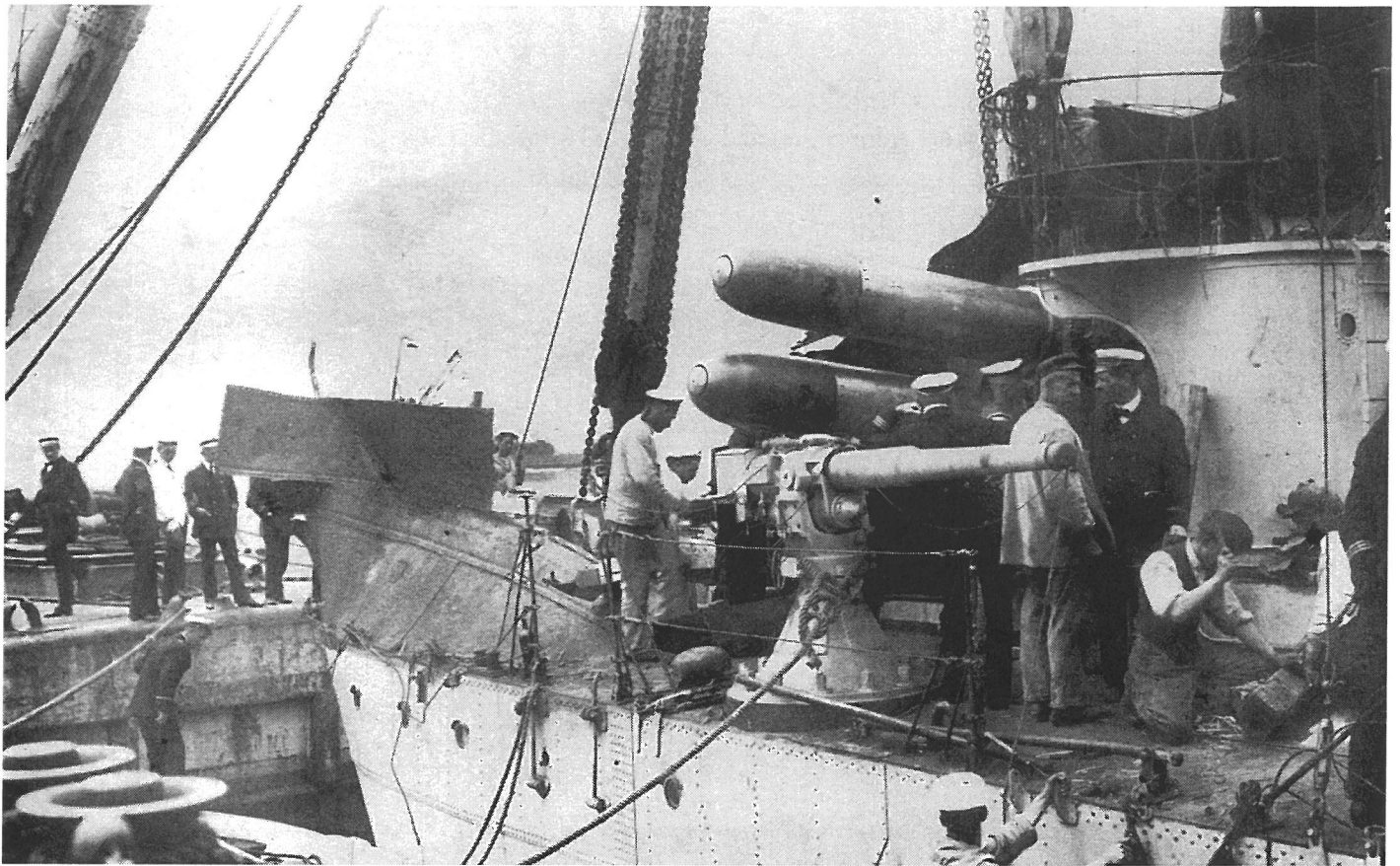
On new trials the maximum speed of 31.94 knots and the average speed of 31.84 knots were reached. On *Csepel* trials with new smoke-screen generators were conducted as well, to be installed later on all destroyers and fast scout cruisers. *Csepel* returned at Boka on 31 October and waited with *Balaton* again for the returning A-H seaplanes on 2 November 1916, and in February 1917 as well.



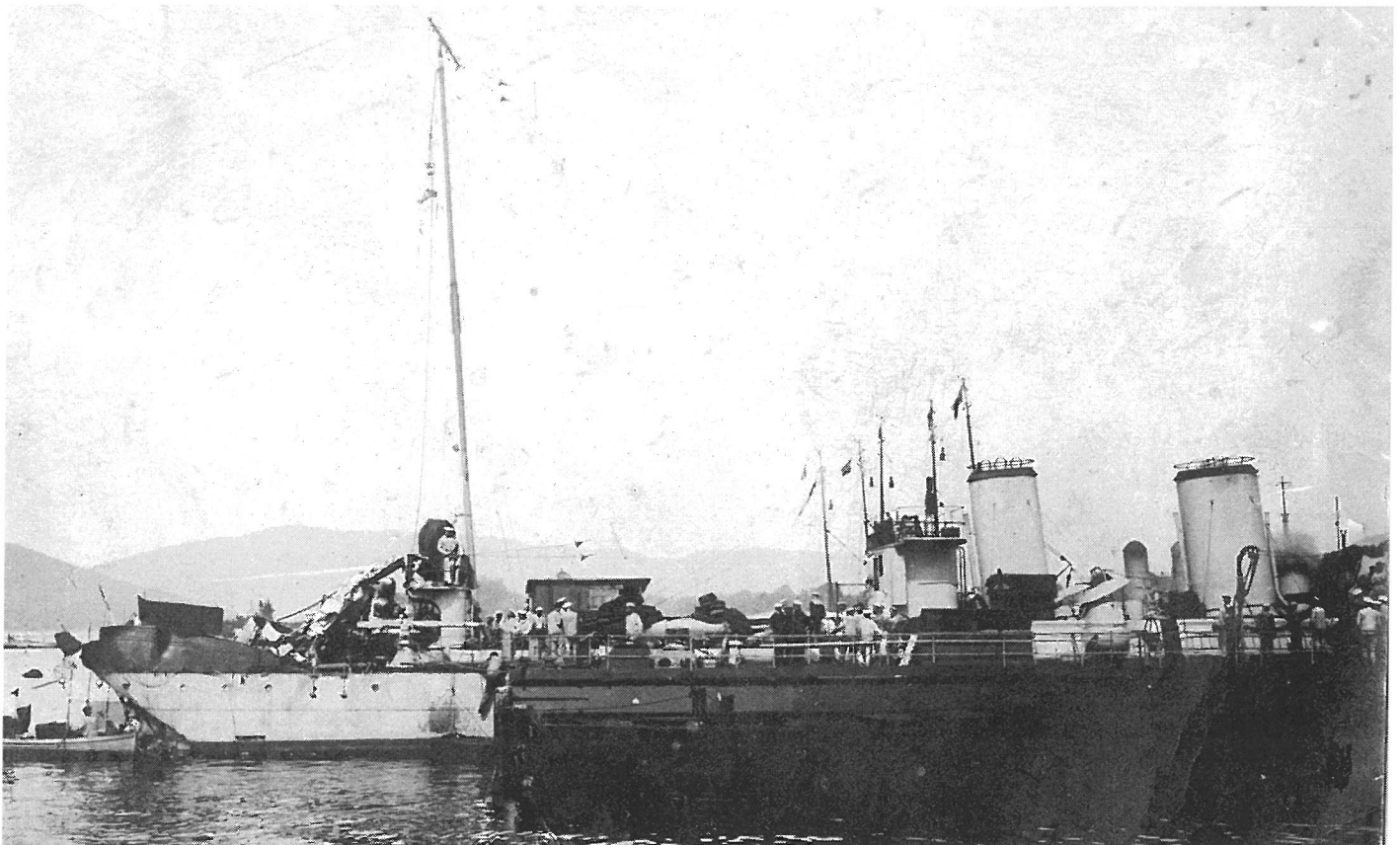
Csepel arriving in tow at Boka kotorska. (Pawlik)



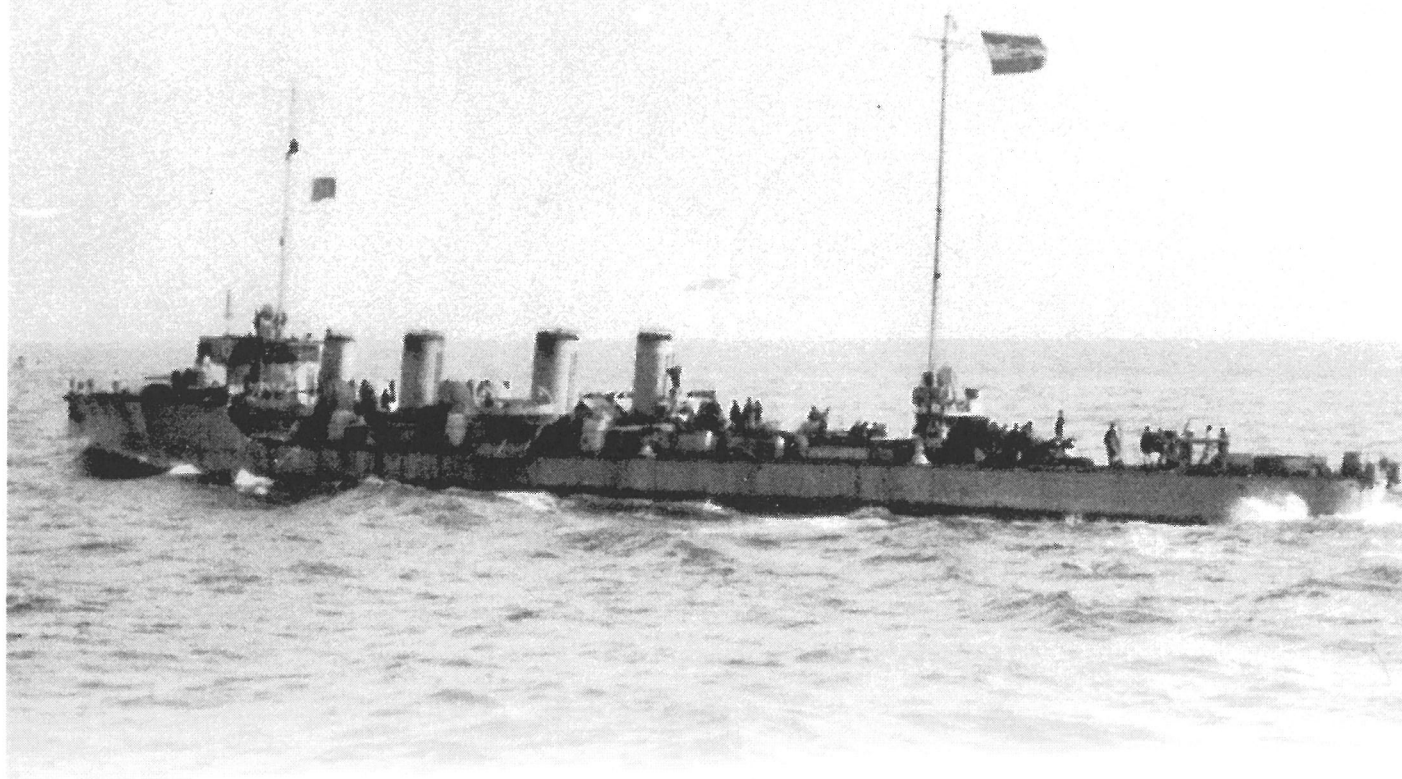
Destroyed stern of *Csepel*; her aft torpedo tubes were thrown by the explosion at the reserve wheelhouse. (Greger)



A view at the destroyed stern of *Csepel* from starboard. (Greger)

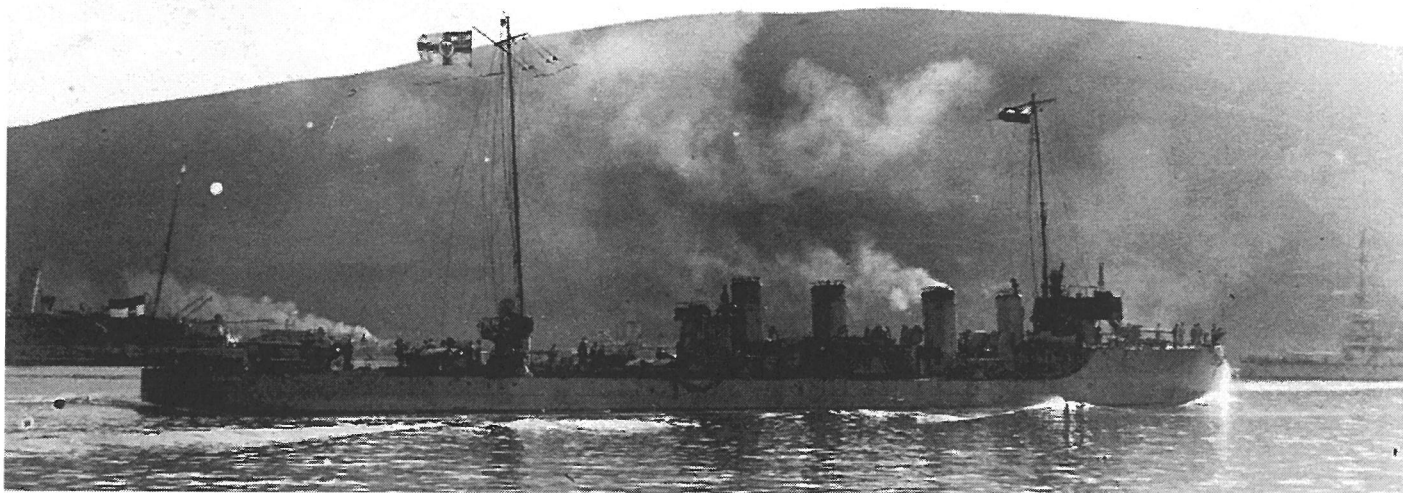


Csepel being repaired in the floating dock. (Greger)

Csepel on 26 September 1917. (Greger)

During 1917, *Csepel* took part at two unsuccessful raids into the Southern Adriatic: on 11 March (with *Orjen*, *Tátra*, and *Balaton*), and on 25 April (with *Tátra* and *Balaton*). At this time her CO was FK Moritz Bauer, being succeeded later by FK Johannes Prinz von und zu Liechtenstein. On 5/6 May, she was taking part with *Tátra* and *Balaton* at another unsuccessful raid into the Otranto Straits, without sighting the enemy. As three A-H cruisers attacked the enemy anti-submarine vessels of the Otranto Barrage on 15 May, *Csepel* and *Balaton* intercepted an Italian convoy off the Albanian coast. They sank the steamer *Caroccio*³⁷ and the destroyer *Borea*, but the steamers *Verità* and *Bersagliere* were only damaged. Both A-H destroyers were afterwards attacked by the Italian flotilla leader *Aquila* but overpowered the enemy warship and left her immobile. Later the French submarine *Bernouilli* (Audry) launched two torpedoes at *Balaton* but missed. The French CO was convinced that his target was *Csepel* again, and he was not completely wrong, as this ship was in fact not very far away! On 14 July, *Csepel* was sent to Pula, being overhauled there between 15 July and 16 September, to return to Boka on 17 September. Her new CO was FK Adolf Potočnik who earlier commanded the destroyer *Warasdiner*. *Csepel* took part at new raids into the Otranto Straits and to the area between Valona and Brindisi on 20/21 September (with *Tátra*, *Orjen*, and *Balaton*) and on 18/19 October (with *Helgoland* and other destroyers of the 1st Flotilla). On 27 September, 5 and 29 November, and 20 December, she was supporting seaplanes, and was sent with *Balaton* and *Tátra* to the Otranto Straits again on 13/14 December. During 1917, *Csepel* escorted a total of 22 convoys, and was seven times supporting seaplanes when returning from their missions.

³⁷ *Caroccio* was former German *Choising*, ex-*Madeleine Rickmers*, that served as a supply ship for the light cruiser *Emden*, and brought a part of her crew (the landing detachment) from the Cocos Island to Arabia.



Csepel in Boka kotorska with the German Imperial ensign on her mainmast because of the birthday of the German Emperors' Wilhelm II. (Pawlik)

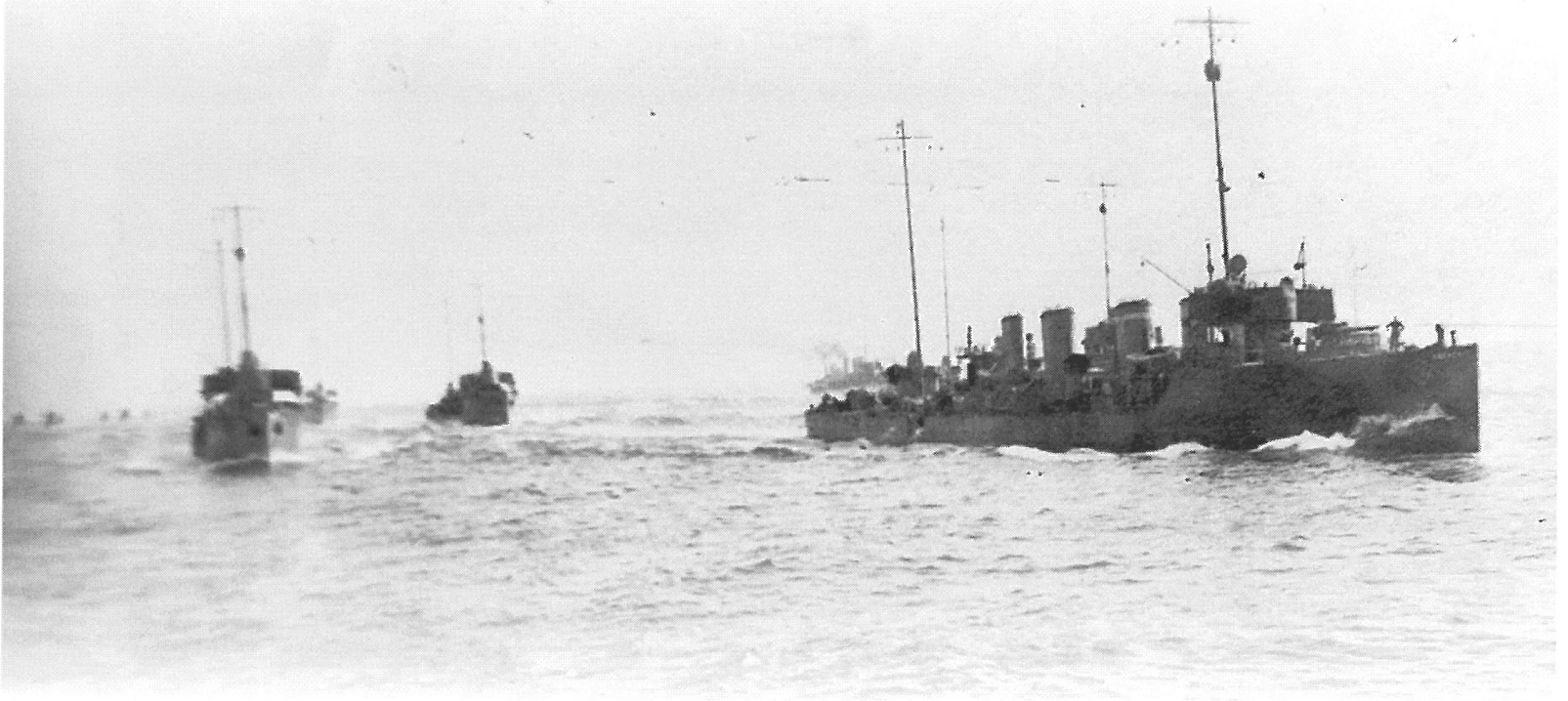
Early in 1918, *Csepel* was in Boka kotorska under FK Adolf von Pokorný. As the sailors' mutiny erupted on 1 February, *Csepel* tried to leave Boka at 1500 hours, to escort a convoy to Durazzo, but rebellious sailors from the armored cruiser *Sankt Georg* fired a shot across her bows, to force her to return³⁸. Later during the afternoon, *Csepel* received an order from *Helgoland* to move to Bijela, but the mutineers on board prevented it and blocked the hatchway leading from the officers' quarters to the deck. Thus *Csepel* was forced, as the last destroyer in Boka, to raise the red flag as well. The sailors on all ships were divided into loyalists and rebels, and soon it became clear that the mutiny had no chance of success. As at 1400 hours on 2 February, the coastal batteries opened fire at the ironclad *Rudolf*, killing Hugo Sagner, one of the leaders of the rebellion, the situation began to change. In the afternoon of 2 February, the commanding officers of *Helgoland* (LSKpt Eric Heyssler) and *Novara* (FK Prinz von Liechtenstein) regained the command, and the destroyers' crews followed soon the example of cruisers' sailors. On light vessels, like cruisers, destroyers, torpedo boats, and submarines, the "class differences" were always less pronounced than on the larger vessels that were leaving harbor less frequently. Beginning at 1420 hours, the cruisers moved to the more secure anchorage in the Bay of Morinje, being followed by torpedo boats 66, 71, 61, 77, and 96, destroyers *Tátra*, *Huszár*, *Warasdiner*, *Dinara*, *Balaton*, and *Orjen*, and finally by *Csepel*, as the last vessel, sailing at 1930 hours. The rebels received an ultimatum to surrender up to 1000 hours on the following day; during the morning hours of 3 February, the battleships of the *Erzherzog* class from Pula reached Boka as well, the mutiny ceased, and red flags were lowered on all warships.

On 6 April, *Csepel* took part with *Novara*, *Tátra*, and *Orjen* at the raid to the Cape Gargano and Pescara, was overhauled in Pula between 7 and 20 April, and took part at a raid to the Otranto Straits with four new destroyers of the *Ersatz Triglav* class (*Triglav II*, *Lika II*, *Uzsok*, and *Dukla*). On 24 April, *Csepel* left Boka for Durazzo with Vice-Admiral Franz von Keil³⁹ aboard and was underway unsuccessfully attacked by British submarine *H 4*. On 28 April, *Csepel* returned to Pula, to be transferred to Boka again on 8 June, in scope of preparations for the large attack against the Otranto Barrage ships, being cancelled after the loss of *Szent István* (see under *Velebit*). Thus *Csepel* returned over Šibenik to Pula on 11/12 June, to be overhauled there. On 12 July, *Csepel* was covering the stranded submarine *Ub. 10*, repelling enemy air attacks. Later she was again stationed in Pula and Boka kotorska. Between 10 and 14 October, she was covering, together with *Helgoland* and *Novara*, and other vessels of the 1st Torpedo Flotilla, the ships evacuating personnel from Durazzo. On 1 November 1918, *Csepel* was handed over with other A-H warships in Boka to the representatives

³⁸ The shot was fired by sailor Mate Brnicevic, later condemned to death as one of the mutiny leaders.

³⁹ Vice-Admiral Keil, later promoted to Admiral, commanded the Officers' Corps, was a torpedo warfare expert, and brought the destroyer *Huszár* from England to Austria-Hungary after her completion.

of the S. H. S. State. She left Boka on 4 November and reached Pula one day later. During 1918, *Csepel* escorted a total of 15 convoys, and was seven times supporting A-H seaplanes returning from their missions. The destroyer was seized by the Italians in Pula, and towed to Venice on 24 March 1919, to take part at the "Victory Parade" there. In 1920, she was officially ceded to Italy, renamed *Muggia* (after a suburb of Trieste), and was commissioned for the Italian *Regia Marina* on 26 September 1920. From 10 March 1927, *Muggia* was stationed in Shanghai, patrolling along the Chinese coast. On 25 May 1929 (because of a typhoon or low visibility in fog) she stranded off Amoy and became a constructive total loss. Her crew was rescued by a Japanese steamer, and later taken over by Italian cruiser *Libia*.



Csepel underway with other destroyers of the *Tátra* class. (Greger)

LIKA (I) was taken-over by the A-H Navy on 8 August 1914, to be commissioned on the same day. Her CO was KK Alois Wünschek, who remained on this post until the vessel was lost in December 1915. The destroyer was patrolling off Pula on 13 August and took part at the rescue of the crew of the torpedo boat **26** (ex-*Flamingo*), lost in the minefield near Pula. *Lika* collided with the torpedo boat **76** on 27 August, but both ships were only slightly damaged. She was sent to Šibenik on 14 September and sighted on 2 November – with the 1st Torpedo Flotilla, led by **Helgoland** – the French fleet off Vis, but no battle with the enemy followed. On 22 December 1914, she was sent with the 1st Flotilla to Palagruža, after the French armored cruiser *Jules Michelet* was sighted there, but without meeting the enemy. *Lika* returned to Pula on 5 January 1915 and during the docking between 20 January and 1 February her propellers were replaced by new ones. On 16 February, she was sent to Šibenik, and on 18 February, there followed a raid of the 1st Flotilla to the Otranto Straits, but without finding any enemy vessels. The destroyer returned to Pula on 23 February, went again to Šibenik on 18 March with the 1st Flotilla, and on 10 April there followed another raid to the Otranto Straits. On 13 April, *Lika* returned to Pula.

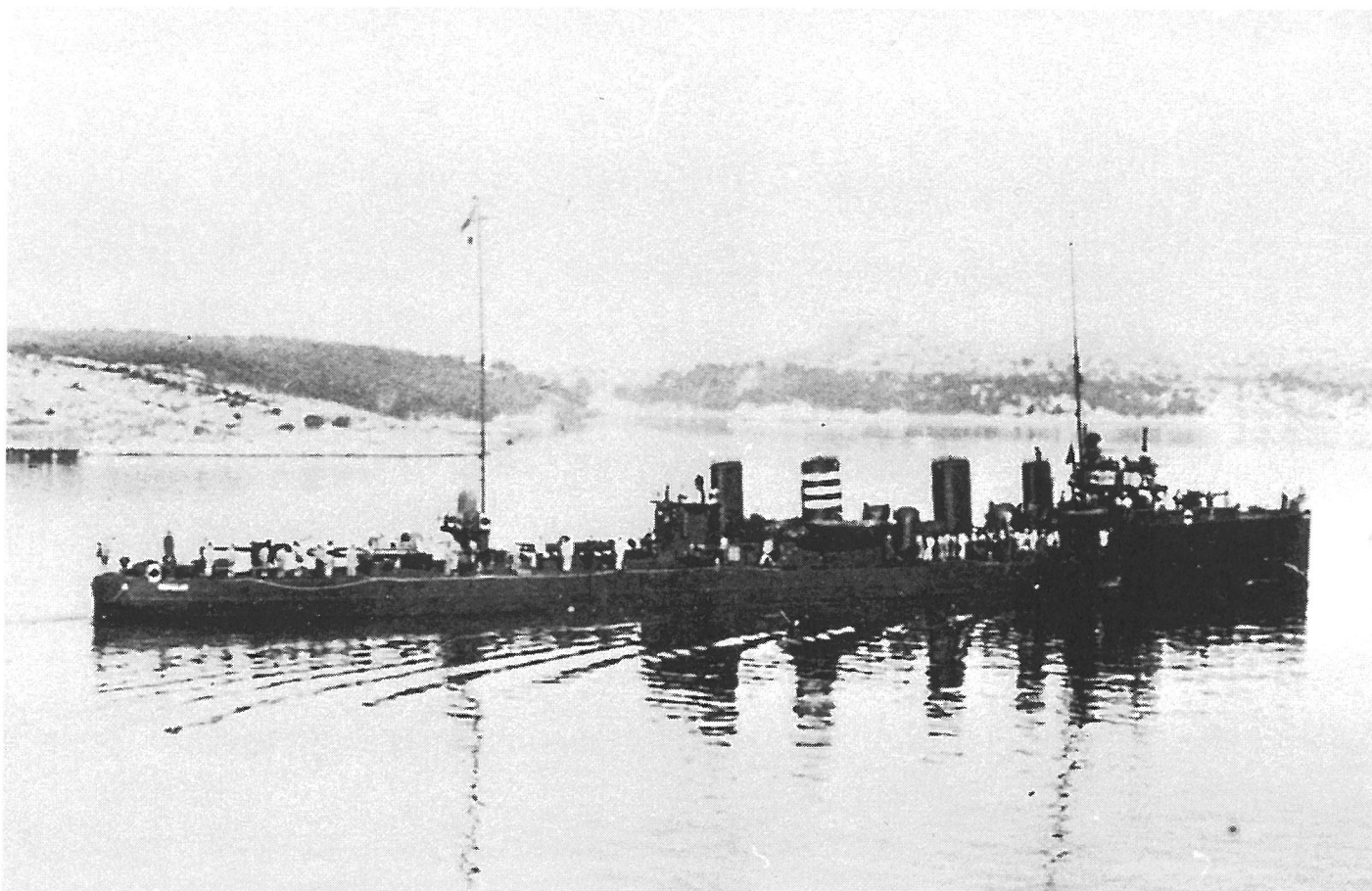


Destroyers *Lika*, *Tátra*, and *Csepel* leaving harbor. (Bilzer)

Lika was again with the 1st Flotilla in Šibenik on 18 May, and before the war against Italy, she was patrolling with *Helgoland*, *Csepel*, and *Orjen* between Lastovo and Palagruža, being later joined there by *Tátra*. On 23 and 24 May, *Lika* was part of the Group G, scouting between Palagruža and Cape Gargano on the Italian coast, and shelling the signal station off Vieste at dawn of 24 May. She took part at the hunt and destruction of Italian destroyer *Turbine* (see under *Csepel*), hitting the vessel with two shells but her torpedo ran under the target without exploding.

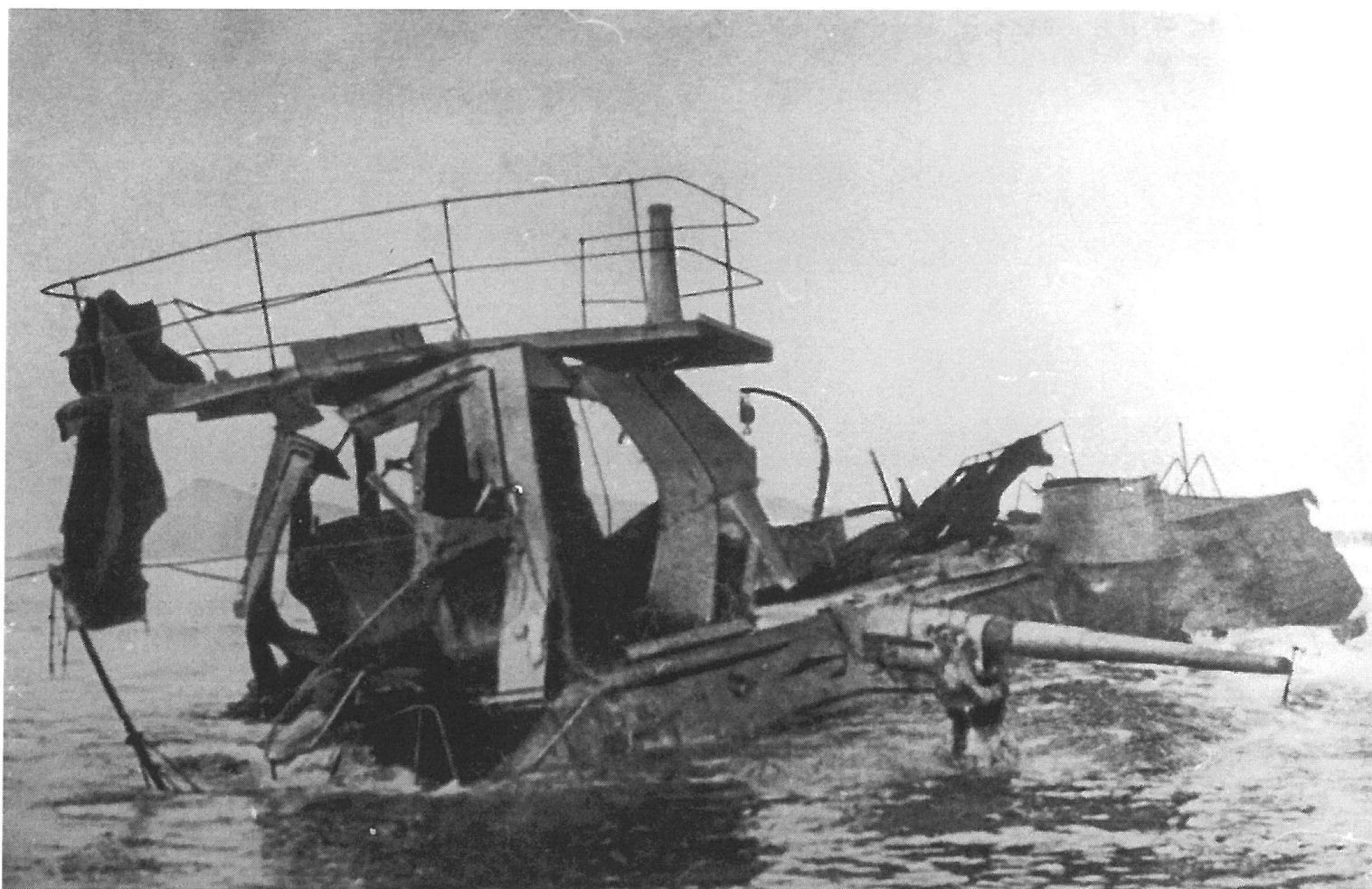
From 27 May onwards, *Lika* was in Šibenik again, and during the attack on Rimini on 17 June, together with *Helgoland* and *Saida*, and other vessels of the 1st Flotilla, she was covering the south flank of the attack group formed by the armored cruiser *Sankt Georg* and the cruiser *Szigetvár* with nine torpedo boats. The attack force was covered from the north by cruisers *Novara* and *Admiral Spaun* with five older destroyers and five torpedo boats. On 25 June, *Lika* took part at the covering operation for the A-H seaplanes, was laying mines with other five *Tátra* class destroyers on 5 July and was shelling targets on Italian coast with *Saida*, *Tátra*, *Csepel*, *Triglav*, *Reka*, *Velebit*, and *Dinara* on 23 July. She also took part at the mentioned attack on the occupied Palagruža on 28 July; from *Lika*'s sailors landed on the island, two were killed, and seven wounded before the force retreated (see under *Csepel*). *Lika* took part at the second attack on Palagruža on 17 August, to return afterwards to Pula. There followed a raid to the Otranto Straits on 22 November, and the ill-fated attack on Durazzo on 29 December, together with *Helgoland*, *Triglav* (I), *Csepel*, *Tátra* and *Balaton*. *Lika* took part at the sinking of several ships in the inner harbor of Durazzo, and leaving harbor, she left the line abaft the leading destroyer and detonated at 0803 hours two mines in shortest time and sank. One officer and 41 crewmen were killed or disappeared, ten swam to the coast and became prisoners-of-war. Other survivors swam to the damaged *Triglav*, as no lifeboats were sent from other A-H warships. On *Triglav* they were given first aid, and *Triglav* was then towed by *Csepel*, and later by *Tátra* and *Balaton*, but was to be abandoned after a strong enemy naval force approached. Other destroyers took over all survivors from both destroyers and brought them to Šibenik. As A-H land forces occupied Durazzo in 1917, four guns and forward twin torpedo tubes were salvaged from the wreck of *Lika*, but the idea to raise the ship was dropped.

TRIGLAV (I) was towed for completion from Kraljevica to Pula on 26 July 1914, to be fitted-out, and commissioned on 8 August, together with **Lika** (I). Her CO KK Alois Ulbing remained on this post until the ship was lost in December 1915. **Triglav** took part at the rescue of survivors from **Baron Gautsch** on 13 August, and from the torpedo boat **26** on 23 August. She was sent to Šibenik on 14 September, and to a scouting mission between Palagruža and Bari on 17 October. Since 18 October, she was in Pula again, on 2 November off Vis (see under **Lika**), and between 9 November and 12 December, she was overhauled in Pula, with new longer shaft bearings installed. She was later stationed in Šibenik and was in a scouting mission to Palagruža on 21/22 December 1914, after the French armored cruiser **Jules Michelet** was sighted there. On 5 January 1915, **Triglav** was sent to Pula, on 16 January to Šibenik, on 28 February to the Otranto Straits, to be on 23 February in Pula, and on 18 March in Šibenik. On 10 April, she was sent with other vessels of the 1st Torpedo Flotilla to the Otranto Straits, and on 13 April, she was in Pula again. On 11 May, she towed the German submarine **UB 7** (alias A-H **Ub. 7**) to a position south of the Cape Sta. Maria di Leuca, from where the submarine proceeded to Turkey alone. **Triglav** later also towed the German submarine **UB 3** (alias **Ub. 9**) from Pula to Đenovići. The tow was afterwards handed over to **Warasdiner** (see there), but the submarine disappeared underway without trace, never reaching the Turkish coast. During the attack of the A-H fleet on the Italian coastal cities on 24 May 1915, **Triglav** operated with the Group G, shelled Barletta, and chased the Italian destroyer **Aquilone** that managed to escape. Other ships of the group sank the destroyer **Turbine** but were forced to retreat after the Italian cruiser **Libia** with the auxiliary cruiser **Città di Siracusa** appeared on the horizon. On the A-H side these ships were believed to be a battleship with a larger cruiser.



Destroyer **Triglav** (I) leaving the harbor of Pula. Typical is the slope between middle and aft superstructures. (Baumgartner)

On 27 May, *Triglav* was in Šibenik, and on 17 June, she took part at the attack on Rimini, already described under *Lika*. She was laying mines off the Cape Gargano on 5 July, towed the German submarine *UC 14* (alias *Ub. 18*) to Boka on 7 July, and *UB 14* (alias *Ub. 26*) on 15 July⁴⁰. She went to Šibenik with the cruiser *Saida* and other destroyers of the 1st Flotilla on 20 July, to shell some railroad bridges on Italian coast in July, and to take part at the attack on Palagruža on 27/28 July; during the landing, one of her sailors was killed, and two were wounded. On 16 August, she was underway from Šibenik to Pula; on 17 August, she was towing the German transport submarine *UC 13* (alias *Ub. 25*) from Pula to Boka, and on 22 August the submarine *UC 12* (alias *Ub. 24*) back to Pula. From 24 August onwards, she was in Šibenik, and took part with the 1st Flotilla at the mentioned raid to the Otranto Straits on 22/23 November. Near Brindisi she sank Italian sailing ship *Galinara*⁴¹, without knowing that it was a camouflaged anti-submarine vessel (*Q-Ship*). A new raid to the Otranto Straits followed on 5 December. On 20 December, *Triglav* was sent from Šibenik to Boka, to take part at the already described attack on Durazzo on 29 December. She entered harbor, and when leaving Durazzo, she – like *Lika* – entered inadvertently a minefield in front of the harbor. After *Lika* exploded two mines, *Triglav* tried to help and detonated one mine at 0810 hours. Ten crew members perished, and three were wounded, but *Triglav* remained afloat. Other destroyers tried to tow her to safety, but a towing line fouled one screw on *Csepel*, and *Tátra* and *Balaton* were compelled to leave their consort because of an expected air attack and the approaching enemy warships.



Wreck of *Triglav* shortly before being sunk. (Martiny)

⁴⁰ SIECHE, *Zeittafel 1914-1916*, p. 73, mentions *UC 14* and *UC 15* (alias *Ub. 19*), while *UB 14* was escorted by the A-H auxiliary *Pelikan*.

⁴¹ AICHELBURG, *Register*, p. 465, is mentioning the name *Kalmara*.

The crews of *Triglav* and *Lika* were taken over by other destroyers, some instruments, documents, and parts of equipment were salvaged, and the explosive charge activated at 1330 hours. As *Triglav* was slowly sinking, several French destroyers approached, wanting to tow her to Brindisi, and as this proved impossible, they shelled the wreck until it sank. The mines responsible for the loss of *Lika* and *Triglav* were laid in early December 1915 by the old Italian cruiser *Puglia* and the flotilla leader *Guigliemo Pepe*. The sinkings of *Lika* and *Triglav* were a great tragedy for the A-H Navy that lost a third of its modern destroyer force in a single day.

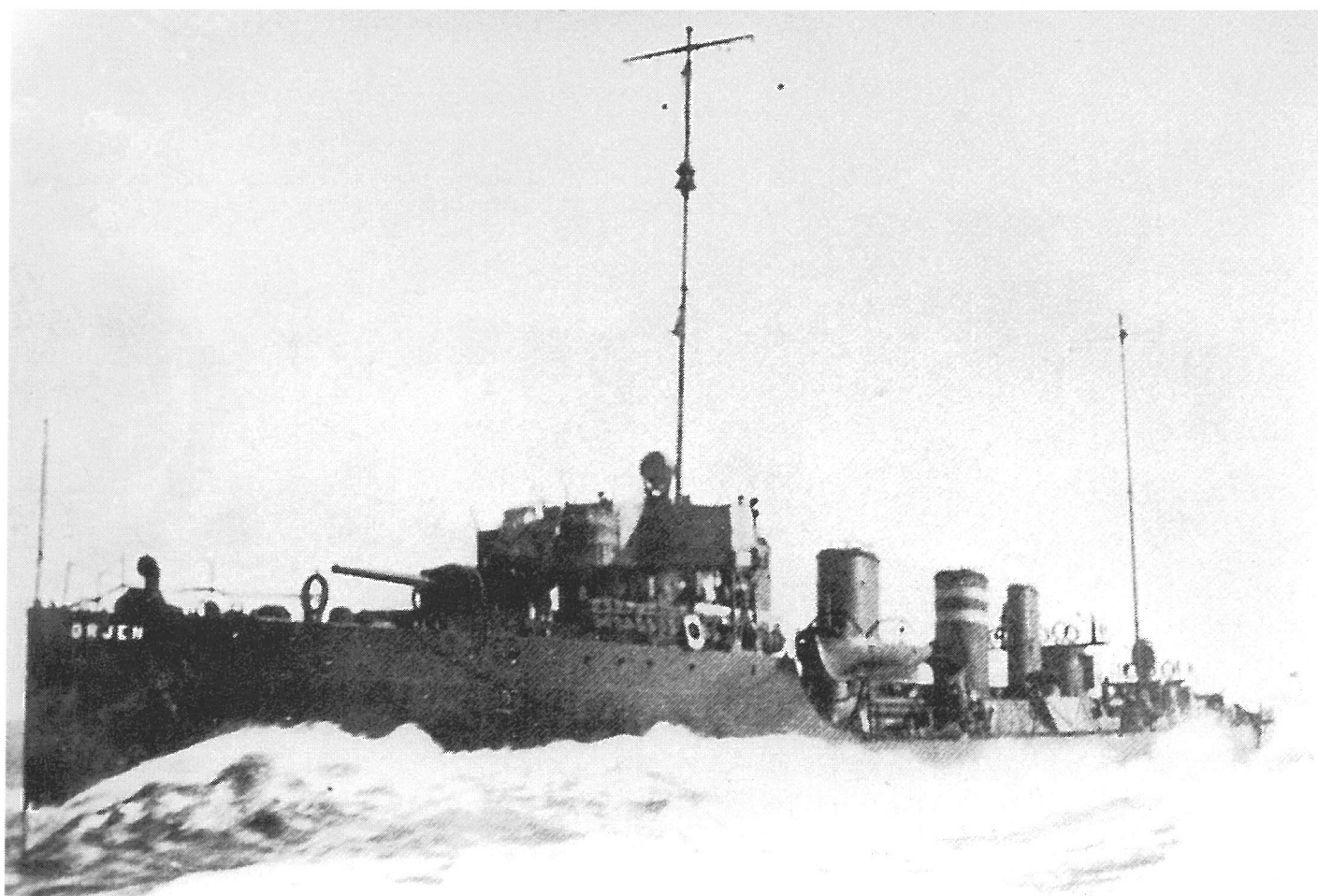
ORJEN was commissioned on 11 August 1914, for the 1st Torpedo Division of the 1st Torpedo Flotilla, and her first CO was KK Gustav Stummer. She was also sent to Šibenik on 14 September and to Vis on 2 November, as the presence of the French fleet was reported, finding near Lastovo one abandoned buoy on 6 November. She was docked in Pula between 9 and 24 December 1914, receiving longer shaft bearings. On 25 December, one of the shafts supports broke away, and the ship was to be docked again. She was stationed in Šibenik, and again in Pula between 5 and 26 January 1915, as she was detached to Šibenik again to take part at the raid to the Otranto Straits on 18 February. She was intermittently stationed in Pula and Šibenik, and another raid to the Otranto Straits followed on 10 April. During the attack of the A-H fleet against the Italian coastal cities on 23/24 May 1915, she was securing the area between Palagruža and the Cape Gargano. On 27 May, she took part at the chase of Italian airship *Città di Ferrara* near Šibenik, after the airship threw 12 or 15 bombs at the merchant steamers being laid-up in the Prokljan Sea. During the attack of A-H warships on Rimini on 17 June, *Orjen* was part of the covering group in the south (see under *Lika*). She was laying mines off Cape Gargano on 7 July and took part at the attacks on Palagruža on 27/28 July, and 16/17 August. Her CO at this time was KK Maximilian Burstyn.

Destroyer *Orjen* at Palagruža, with the destroyed lighthouse in the background. (Greger)



On 17 October, *Orjen* patrolled on the line between Palagruža and Bari, she was in Pula on 18 October, and on 22/23 November, she took part at the raid to the Otranto Straits, rescuing seven crew members from the sunken Italian steamer *Palatino*. After an overhaul in Pula between 15 December 1915 and 2 January 1916, she was sent after new trial to Boka on 3 January and was to attack Durazzo on 27 January with *Novara* and *Csepel*, but both destroyers collided, and the bow of *Orjen* was bent. She returned to Pula to be repaired there, and the work was completed on 16 February. On 19 February, *Orjen* was in Boka again. A new raid to the Otranto Straits on 23 February was cancelled because of adverse weather, and during another attack on Durazzo on 26/27 February the 1st Flotilla has not met enemy warships during the evacuation from Durazzo.

On 14 March, *Orjen* was escorting with *Balaton* the transport of guns to Durazzo on the auxiliary *Cyclop* and one lighter (see under *Balaton*), and on the way back she was attacked in vain near the Cape of Rodon by two enemy aircraft. On 23 March, and on 26/27 March, she was searching with other ships for the submarine *Ub. 24*, in fact the German *UC 12* (that was lost off Taranto already on 16 March). On 2 April, she was searching for the survivors from the steamer *Andrássy*, torpedoed by an enemy submarine. At this occasion, *Orjen* was attacked unsuccessfully by another submarine. On 31 May 1916, the command was taken over by *FK Maximilian Burstyn*. In the night of 31 May/1 June, *Orjen* and *Balaton* - together with torpedo boats *77 T*, *79 T*, and *81 T* - attacked the vessels of the Otranto Barrage, and the drifter *Beneficent* was sunk by a torpedo from *Orjen*. On 3 June 1916, *FK Leopold Huber von Scheibenhain* took *Orjen* over. On 3/4 July, she took part at another raid into the Otranto Straits (with *Helgoland*, *Tátra* and *Balaton*), returning to Pula on 4 September, to be overhauled there between 1 and 22 October. On 23 October, she returned to Boka, to escort convoys afterwards.



Orjen underway. (Eichardt)

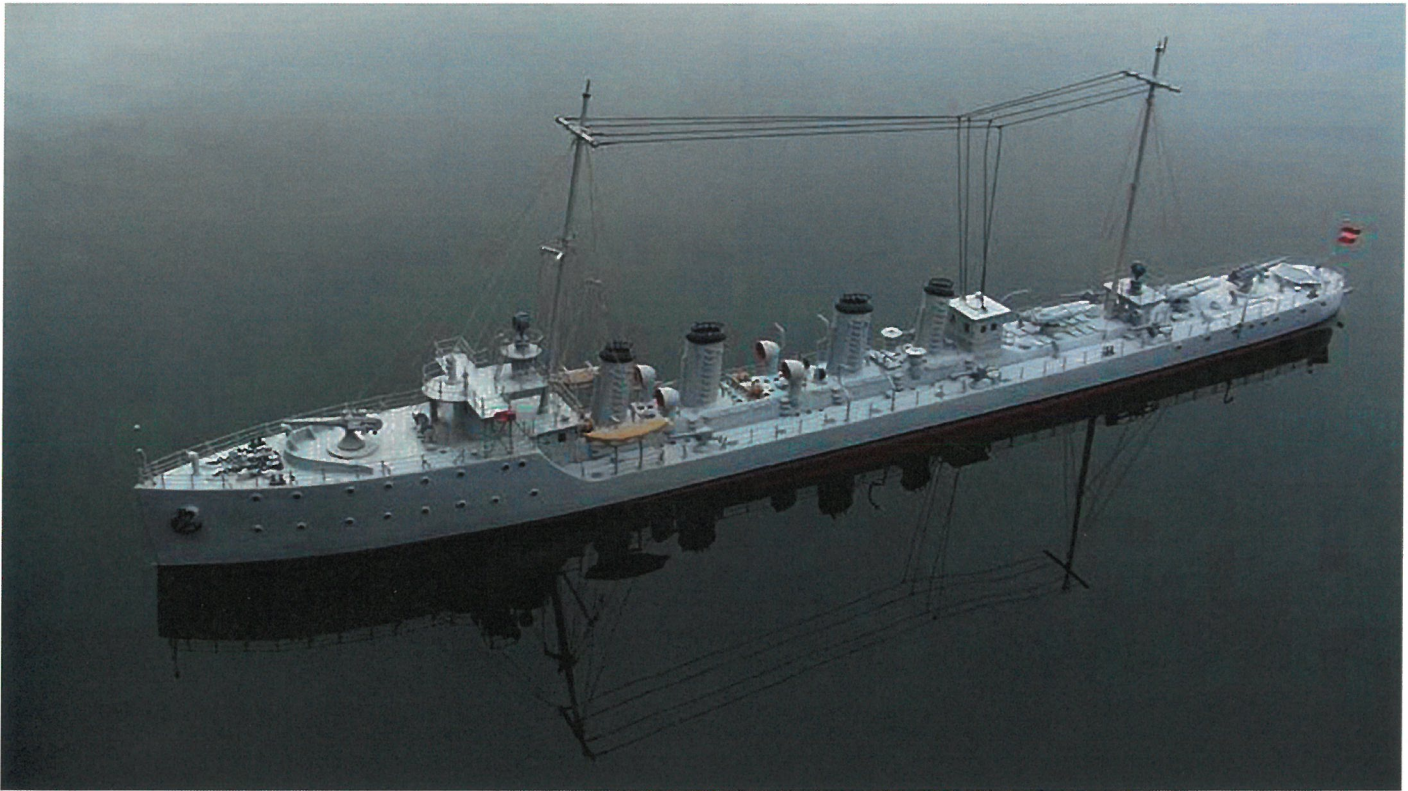
A new raid into the Otranto Straits (with *Csepel*, *Tátra*, and *Balaton*) followed on 11/12 March 1917. *Orjen* arrived at Pula on 30 March, and during the overhaul her boilers were replaced and electric data transmission between the range finder and the 10 cm guns was arranged. After new trials on 14 May, *Orjen* arrived at Đenovići again on 17 May. Her new CO was KK Milan von Millinković, allegedly succeeded later by KK Marian Pohl (Marijan Polic?). On 11 August, she was waiting for A-H seaplanes returning from their mission, together with *Balaton* and *Ulan*, and on 20 September, there followed a raid to the Otranto Straits with *Tátra*, *Balaton*, and *Csepel*. During 1917, *Orjen* was escorting 31 convoys, and was eight times supporting seaplanes after their missions. On 1 February 1918, she was in Boka during the sailors mutiny, and her CO, KK von Millinković, permitted the red flag to be hoisted, as not to provoke the rebels. The rebellion on the ship was over on 2 February, and *Orjen* left Đenovići at 1730 hours, sailing to a secure anchorage in the Bay of Morinje (see above). During the year, more operations followed, on 6 April, *Orjen* was shelling the Italian coast on Cape Gargano and of Pescara and she returned to Pula on 7 April. Her CO at this time was still Milan v. Millinković, in the meantime promoted to FK. *Orjen* was to take part at the large raid against the Otranto Barrage vessels in June 1918 (with the Support Group a, together with the battleship *Viribus Unitis*, the destroyer *Balaton*, and torpedo boats 86, 90, 96, and 97, but this operation was cancelled after the loss of *Szent István*, and *Orjen* returned to Pula on 11 June.



Orjen late during the war in a very neglected state. (Greger)

On 17/18 July 1918, as **Orjen** was waiting for A-H seaplanes returning from an attack, she was attacked by enemy airplanes, but suffered no losses. On 2 October, she was sent to Boka, and was laying mines off Durazzo together with **Tátra**, **Lika** (II), **Dukla**, and **Uzsok** on 7 October. She was covering convoys leaving Albania on 10 October, and on 13 October also the stranded steamer **Oceania** (*Spitalschiff V*).

In 1918, **Orjen** was escorting 18 convoys and was seven times supporting seaplanes. Her CO in late 1918 was *FK* Viktor von Joly, commanding at the same time the destroyer **Dukla**. On 4 November 1918, **Orjen** left Boka for Split, being seized there by the U. S. Navy. In January 1920, she was ceded to Italy. Under her new name **Pola**, she served from 1922 onwards as a training ship for machinery personnel in Venice (as a part of the 8th Destroyer Squadron), making some training cruises to Libya and Constantinople. She was stricken from the fleet list in Taranto in 1924 and put into reserve. In March 1928, she served as a colonial gunboat in Libya, was with the 8th Squadron in Venice again in 1929, in Libya in 1930, and was renamed **Zenson** (II) on 9 April 1931, as the name **Pola** was assigned to a new heavy cruiser. There followed other training cruises to the Aegean Sea, and a stay in Venice, and the vessel was stricken for the last time on 1 May 1935 and scrapped.

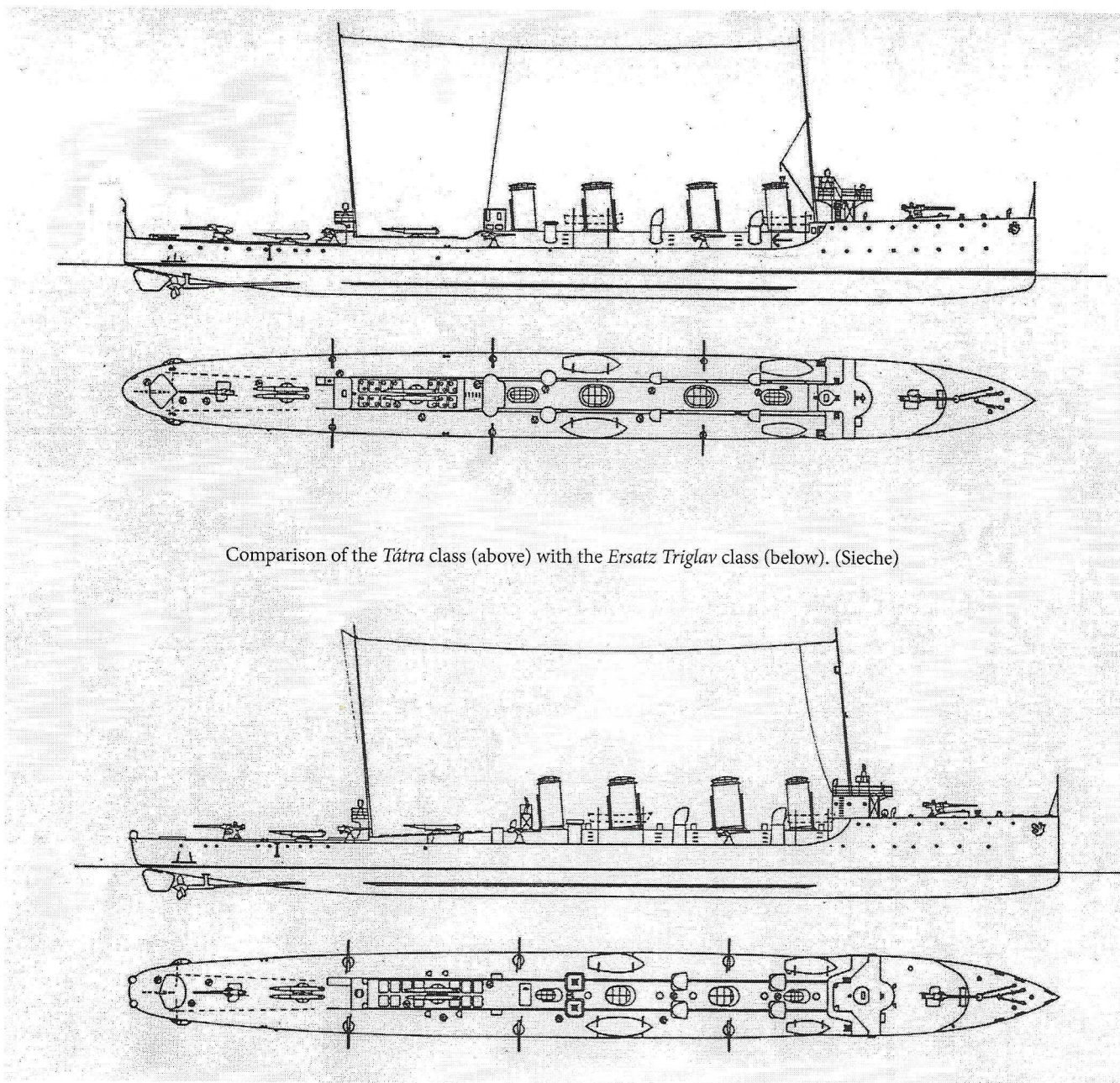


Destroyer **Csepel** of the **Tátra** class as a model. (Hüvös)

DESTROYERS OF THE *ERSATZ TRIGLAV* CLASS

As the war began, the Austro-Hungarian Navy gave up shortsightedly the construction of several authorized warships. The approved Fleet Plan for 1914 envisaged the building of four new 24,500-tonnes *Super-Dreadnoughts*, three 4,800-tonnes cruisers, and six additional 800-tonnes destroyers (of the *Tátra* class). It was assumed that the war would be short-lived, and the ships not completed in time to take part, thus they were not ordered at all, and the already approved financial means returned to the common budget. Only the last installment for completing the *Tátra* class destroyers was used, and the building of six new destroyers of the same class was postponed “to a later time”, according to a decision dated already from 17 March 1914.

As mentioned, the sinking of two *Tátra* class destroyers on 29 December 1915 was a heavy blow to the A-H Navy that lost one third of its modern vessels of this type. Already on 1 January 1916, the Fleet Command made a request for construction of replacement vessels that were to be longer by two frames and armed with two 12 cm (4.7in) and two or three 9 cm (3.5in) anti-aircraft guns. The engineers of the Danubius shipyard were convinced that higher speeds were possible with improved propellers. The already retired A-H Chief Engineer Siegfried Popper (who designed all A-H battleships from the *Monarch* to the *Tegetthoff* class) suggested to build ships similar to the *Tátra* class, engined by steam turbines produced by the Breitfeld, Danek & Co. factory from Prague for the Chinese 1,800-tons cruisers being built in Monfalcone. Thus the first destroyer could be completed only seven to nine months after her keel was laid, with other two following five to seven weeks later. The 14,000 hp turbines could enable the maximum speed of “only” 30 knots, but the weight could be spared by mounting only two 10 cm and four 7 cm guns, and two coal-fired boilers were not necessary, as on the *Tátra* class they were only “taken along for a walk”. Poppers idea was refused, and finally four vessels largely similar to the *Tátra* class were ordered. The idea to mount 12 cm (4.7in) and 7 cm (3.5in) guns was dropped too, but two aft 7 cm guns were from the outset to be mounted in anti-aircraft mountings. The hull was to be lengthened by six frames and strengthened by longitudinal frames, the magazine for reload torpedoes in the lower hold omitted and used for additional oil bunkers, and all six boilers arranged for additional oil-firing. Finally four boilers were oil-burners only, and two were coal-burners with additional oil-burning. The deck under and around the 10 cm mountings was to be strengthened, the voice-tubes for the transmission of data between the rangefinder and the 10 cm guns were to be replaced by electric transmission, and 7 cm mountings were to be directed via voice-tubes. The replacement torpedoes were to be stowed on deck, the wireless cabin moved to the aft part of the bridge superstructures, and the transition between the middle and aft superstructures was less prominent, without the short slope as on the *Tátra* class. The deckhouse for the wireless station was omitted, and on its place abaft the fourth funnel the platform for the anti-aircraft machine gun was erected. The middle part of the commando bridge was enclosed, and the sidelights made from security glass, what was later carried-out on some destroyers of the *Tátra* class as well. The reserve steering position was placed abaft the mainmast as on the *Tátra* class. The propellers delivered from Germany did not meet the conditions and were replaced by new three-bladed propellers with 2,520 mm in diameter. The destroyers carried two 827-kg Tyszak anchors and one 200-kg Admiralty anchor. The shape of the hull differed from the ships of the *Tátra* class, but the rudder was of the suspended type as well.



Tactical and technical data of the *Ersatz Triglav* class

Displacement	Design displacement 880 tonnes, full load 1,050 tonnes.
Dimensions	Length between perpendiculars 82.32 m, over all 85.28 m, beam 7.80 m, draught 2.40 – 3.20 m.
Propulsion and fuel	Steam turbines with 20,650 hp (15,183 kW); 108 tonnes coal, 142.7 tonnes oil.
Speed	Average 32.8 knots, <i>Dukla</i> : 33.8 knots.
Range	560 miles at full speed.
Armament	Two 10 cm (3.9in) and six 7 cm (2.6in) guns (two in a-a mountings), one 8 mm anti-aircraft machine-gun, four 45 cm (17.7in) torpedo tubes (2x2) for a total of six torpedoes.
Complement	Five officers with 110 petty officers and sailors.

In accordance with the final contract from 5 Mai 1916, four destroyers were to be completed between 19 March and 4 August 1917, but the deadlines were exceeded by 13 to 20 weeks. On 6 January 1916, the first pair was officially allocated the names of two lost destroyers of the *Tátra* class, and they were to be named *Triglav* (II) and *Lika* (II), with the second pair, *Dukla* and *Uzsok*, being named after passes in the Carpathians, where significant battles between the Austro-Hungarian and Russian armies were fought during the World War One.

Building data of the *Ersatz Triglav* class

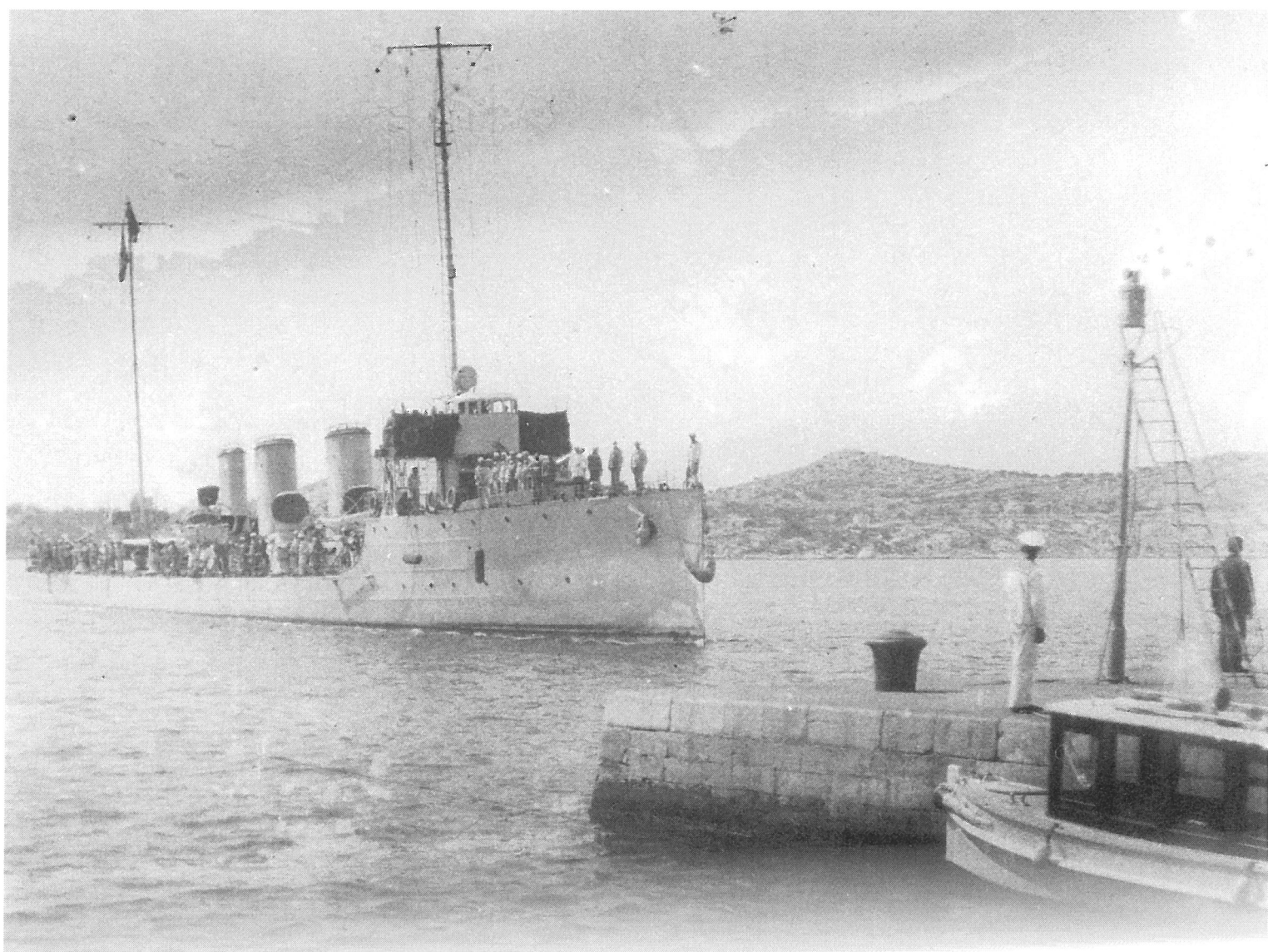
Name	Shipyard	Keel laying	Launching	Commisioning & take-over
<i>Triglav</i> (II)	Danubius, Rijeka	24/08/1916	24/02/1917	09/06/1917 & 16/06/1917
<i>Lika</i> (II)	Danubius, Rijeka	24/08/1916	08/05/1917	06/08/1917 & 05/09/1917
<i>Dukla</i>	Danubius, Kraljevica	11/09/1916	18/07/1917	08/10/1917 & 07/11/1917
<i>Uzsok</i>	Danubius, Rijeka	25/09/1916	26/09/1917	18/12/1917 & 22/12/1917



Destroyer *Triglav* (II), a view from the stern.
(Pawlik)

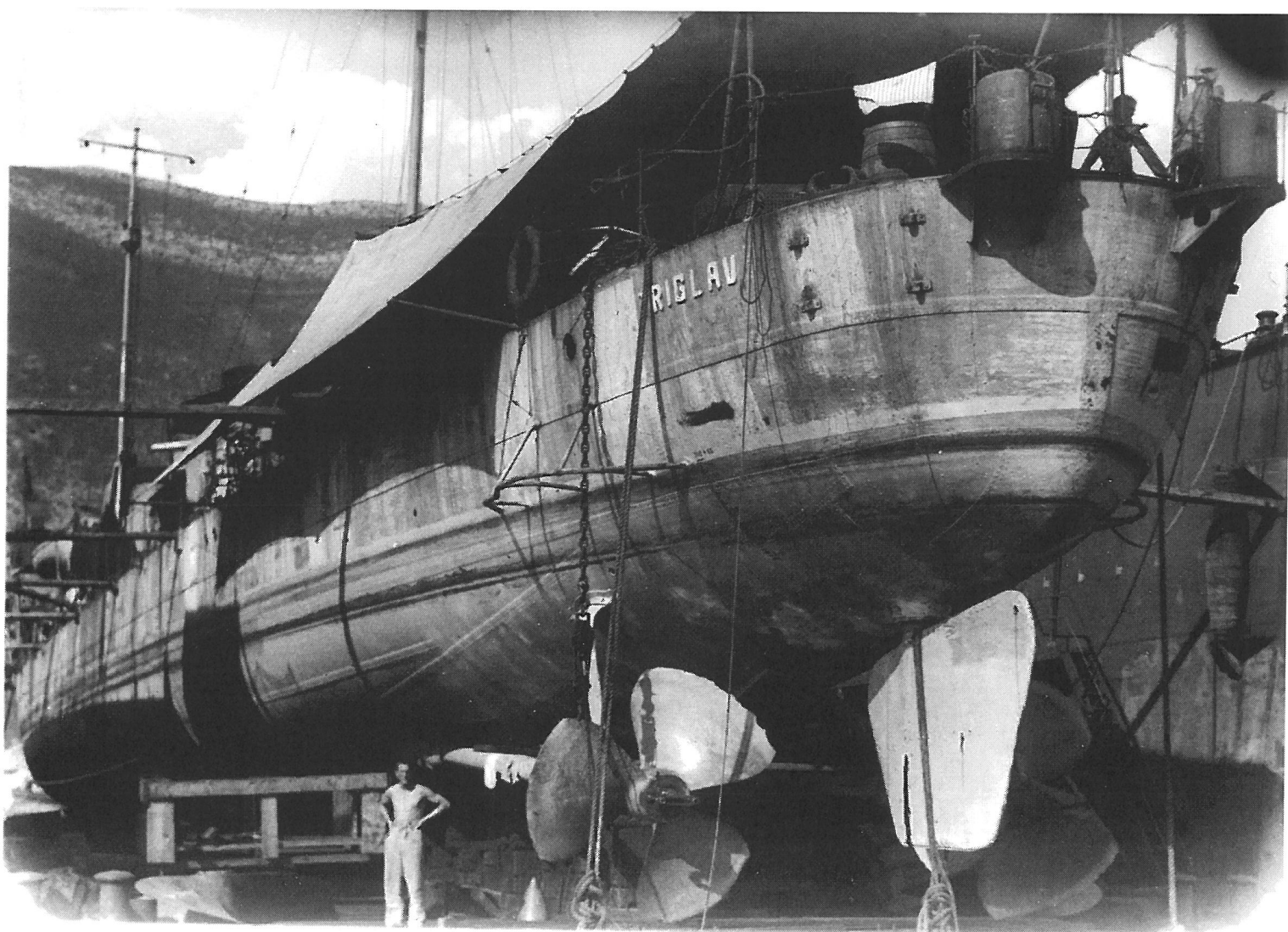
SERVICE AND FATES

TRIGLAV (II) served as a convoy escort on 26/27 August 1917, soon after being commissioned under *FK* Werner von Marschall,. On 12 September, she was searching for mines, and on 13 September, she was escorting the ironclads **Budapest** and **Wien** returning to Pula from Trieste, being constantly attacked there by enemy aircraft. On 29 September, she was stationed in Boka, on 8/9 October she escorted one convoy, and on 18/19 October she took part with **Helgoland**, **Tátra**, **Orjen**, **Balaton**, **Csepel**, and **Lika** (II) at a raid to the Otranto Straits. **Triglav** (II) and **Csepel** were attacked by three enemy aircraft with ten bombs but suffered no damages. She returned to Pila on 29 October, and there followed a docking and an overhaul up to 14 November. New trials followed on 15 and 16 November, and on 19/20 November, she protected some torpedo boats laying mines (together with the destroyer **Reka**), to make afterwards a scouting sortie to the Po estuary, together with **Dukla**, **Reka**, **Huszár**, **Streiter**, **Scharfschütze**, and six torpedo boats, but no enemy vessels were sighted.



Triglav (II) off the pier in Šibenik. (Pawlik)

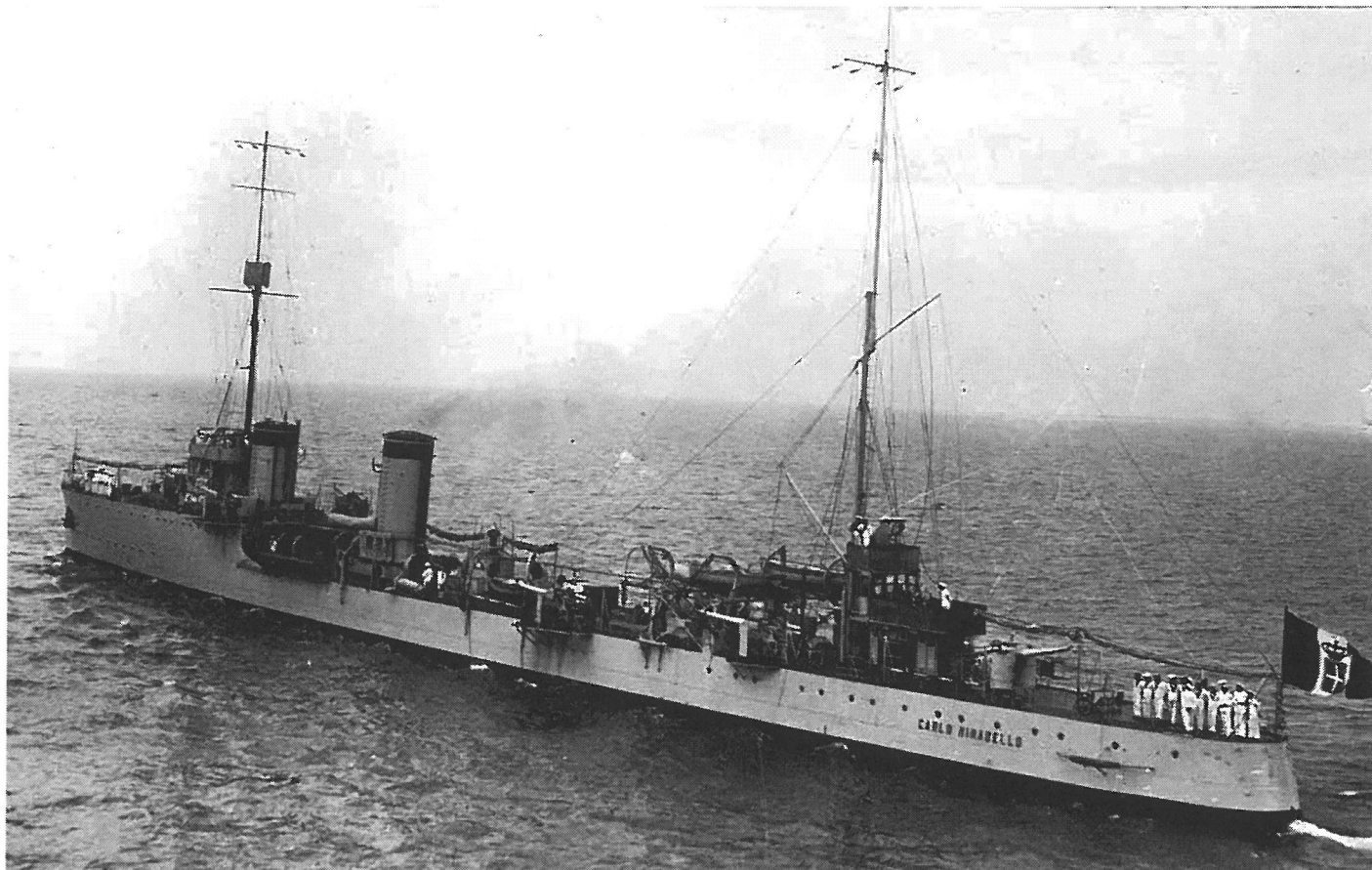
On 21 November, *Triglav* (II) was together with *Dukla* inspecting the A-H mine barrages and was later searching for the missing seaplane *K 161*, downed off the Po estuary. On 24 November, she was supporting A-H seaplanes returning from attack, together with *Pandur* and other above mentioned destroyers. On 28 November, she was scouting with *Reka*, *Dinara*, and torpedo boats *86*, *91*, *90*, and *79* along the Italian coast and shelling a freight train near Fano. There was also another scouting group formed by *Dukla*, *Streiter*, *Huszár*, and four torpedo boats. Another reconnaissance mission by both groups followed on 7 December, and on 11 December, *Triglav* was detached to Trieste with *Admiral Spaun* and five destroyers. Later she returned to Pula for a boiler cleaning, remaining there from 22 December 1917 to 14 January 1918. She was waiting for A-H seaplanes again on 15 January 1918, being attacked at sea by two enemy aircraft⁴². On 2 February, she sailed from Pula with *Ulan*, *Turul*, *Csikós*, and eight torpedo boats, escorting the battleships of the 3rd Division, sent out to quench the mutiny in Boka (see above), to return to Pula already on 5 February. On 6 and 24/25 February, she was again sent out to support the seaplanes, and in the morning of 25 February, she towed the damaged seaplane *K 380* to Poreč. Two more similar operations followed on 10 and 17 March.



Stern of *Triglav* (II) being docked in Boka kotorska. (Pawlik)

⁴² This attack was not mentioned by SIECHE in *Zeittafel* 1918.

On 4 April, *Triglav* sailed from Pula with the battleship *Erzherzog Karl* (as the ships of the 3rd Division were permanently moved to Boka to replace old armored cruisers), together with *Saida*, *Lika* (II), *Uzsok* and *Dukla*, arriving at Boka on 7 April. During a sortie against enemy transport ships in the Otranto Straits on 22/23 April 1918, together with *Lika* (II), *Uzsok*, *Dukla*, and *Csepel*, the force clashed during the night with the British destroyers *Jackal* and *Hornet*. After *Hornet* was damaged and retreated, *Jackal* was joined by the British destroyers *Alarm* and *Torrens*, together with the French *Cimeterre*. The battle was fought near Valona, and British cruiser *Gloucester* were approaching, thus the A-H destroyers were compelled to retreat. From Brindisi sailed the Italian flotilla leaders *Mirabello* and *Pepe* with destroyers *Bronzetti*, HMS *Redpole*, and *Rifleman*, but they arrived too late at the scene. The A-H destroyers suffered no damages, in contrast to *Jackal* with two killed and five wounded, and *Hornet* with five killed and 20 wounded. *Orjen* sailed from a day before, the 22 April, under her new CO, FK Karl Herkner.



Italian flotilla leader *Carlo Mirabello* was one of adversaries of A-H destroyers on the Adriatic. Large vessels of this class had a displacement of 2,040 tonnes and were armed with one 6in and seven 4in guns. (Rastelli)

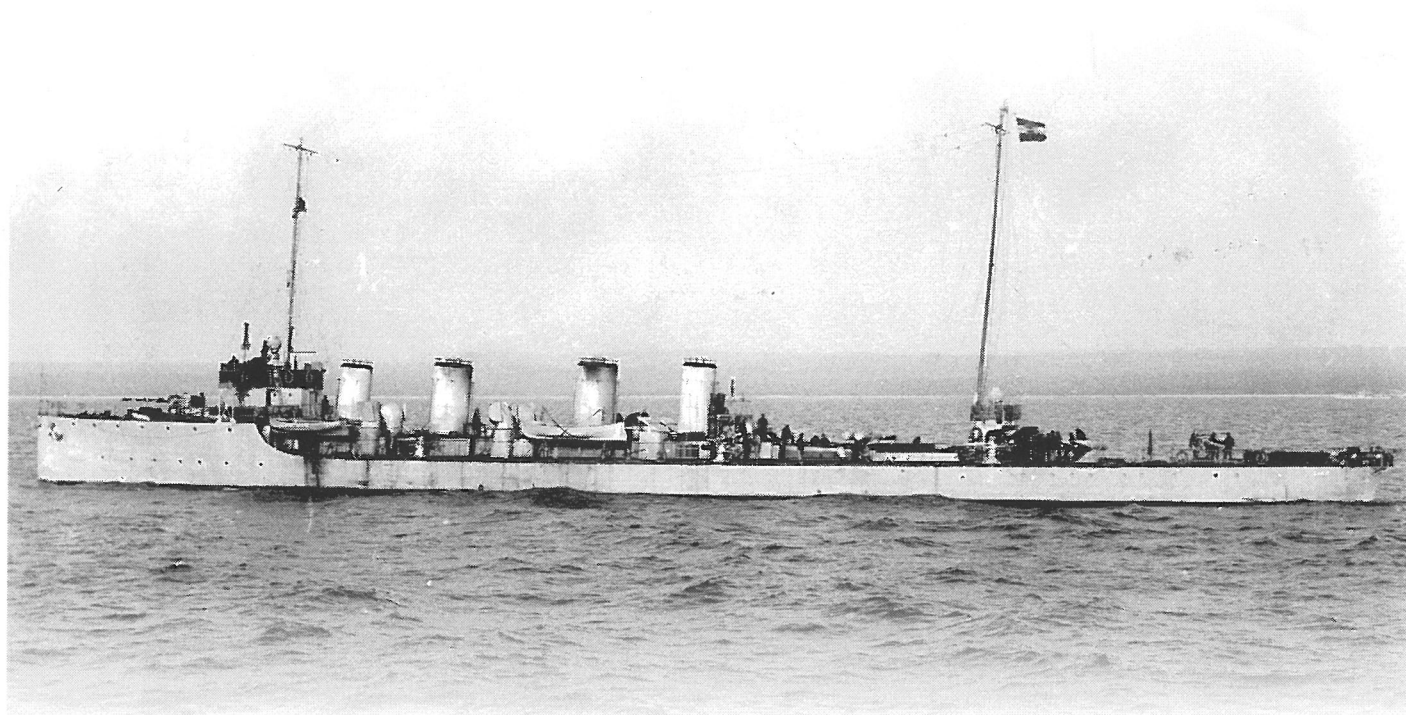
On 29/30 April, *Triglav* was escorting one convoy, and on 17/18 May she took part – together with *Lika*, *Dukla*, and *Uzsok* – at an unsuccessful action against some vessels supporting an attack by Italian MAS off Cape Laghi. On 29/30 May, there followed another convoy escort mission, and on 10 June, *Triglav* was to take part at the large but cancelled raid against the Otranto Barrage, in scope of the Attack Group *a*, with *Novara*, *Helgoland*, *Tátra*, *Csepel*, and *Lika*. From 7 July to the 17 September, *Triglav* was overhauled in Pula, to return on 18 September to Boka and to remain there until the end of the war. She was seized by the French and towed to Bizerte. She was officially ceded to Italy in 1920 and renamed *Grado* on 26 September 1920. In November of the same

year, she was towed by Italian tug *Ercole* to Messina, and later – in July 1921 – to Pula. She was repaired and rebuilt in Pula and Trieste, to serve with the Italian squadron in Venice since October 1924. She remained in service up to 30 September 1937, to be stricken and later scrapped.



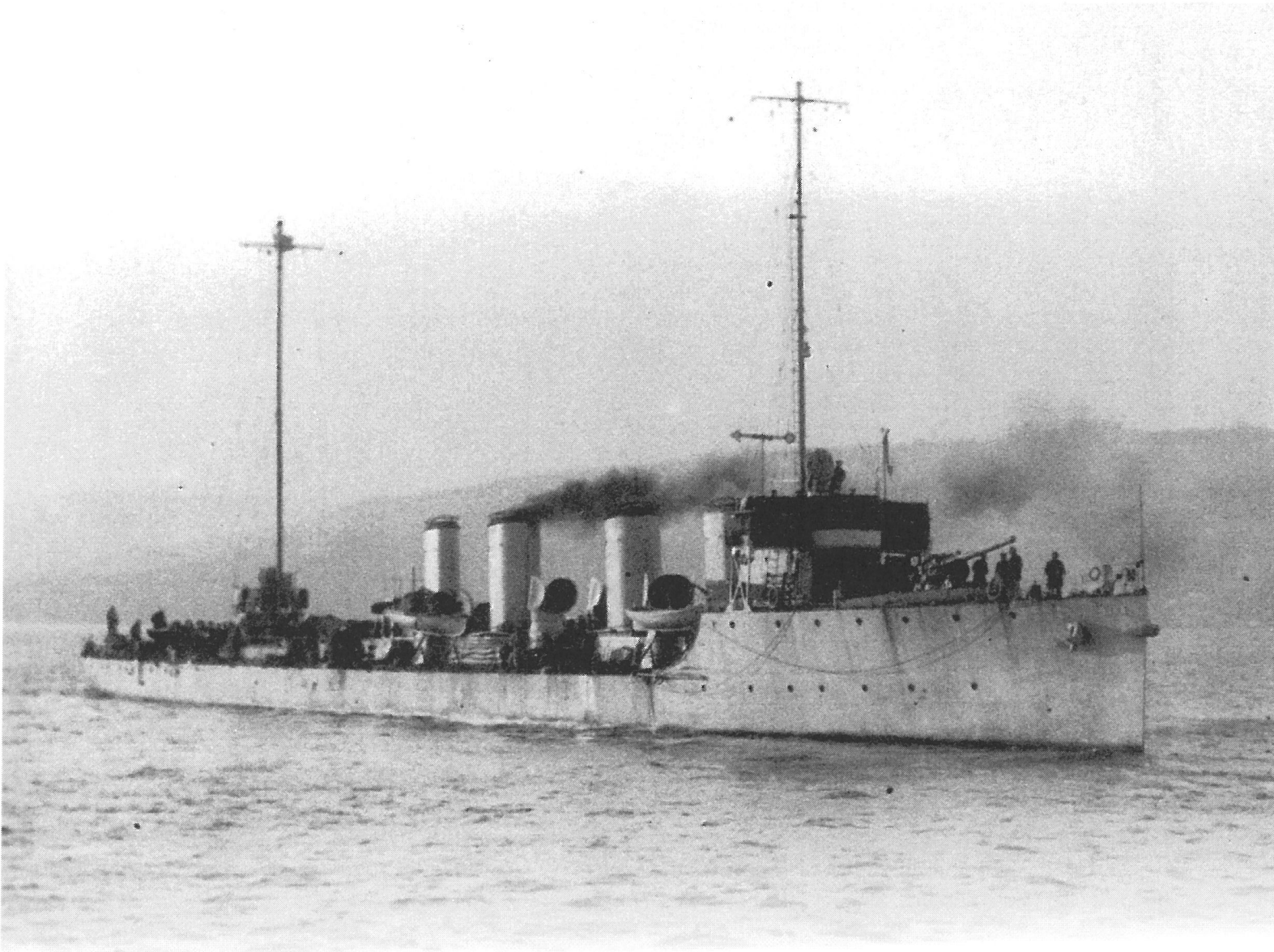
Triglav (II) by-passing *Dukla*; on her bridge wings signal semaphores could be seen. (Pawlik)

Destroyer **LIKA** (II) entered service on 6 August 1917, under FK Virgil Sandor de Vist as her first CO. During trials on 12 August 1917, she reached a speed of 33.58 knots. On 29 August 1917, she was moved to Boka kotorska, and was operational on 29 September, to escort her first convoy on 6/7 October. On 18/19 October, she took part with **Helgoland** and other destroyers (see under **Triglav II**) at a raid to the waters between Brindisi and Cape Mendere, and 30 miles west from Durazzo she was attacked unsuccessfully by an enemy submarine.



Lika (II) underway. The *Ersatz Triglav* class had a machine-gun platform abaft the fourth funnel instead of a wireless cabin. The signal semaphores could be clearly seen. (Pawlik)

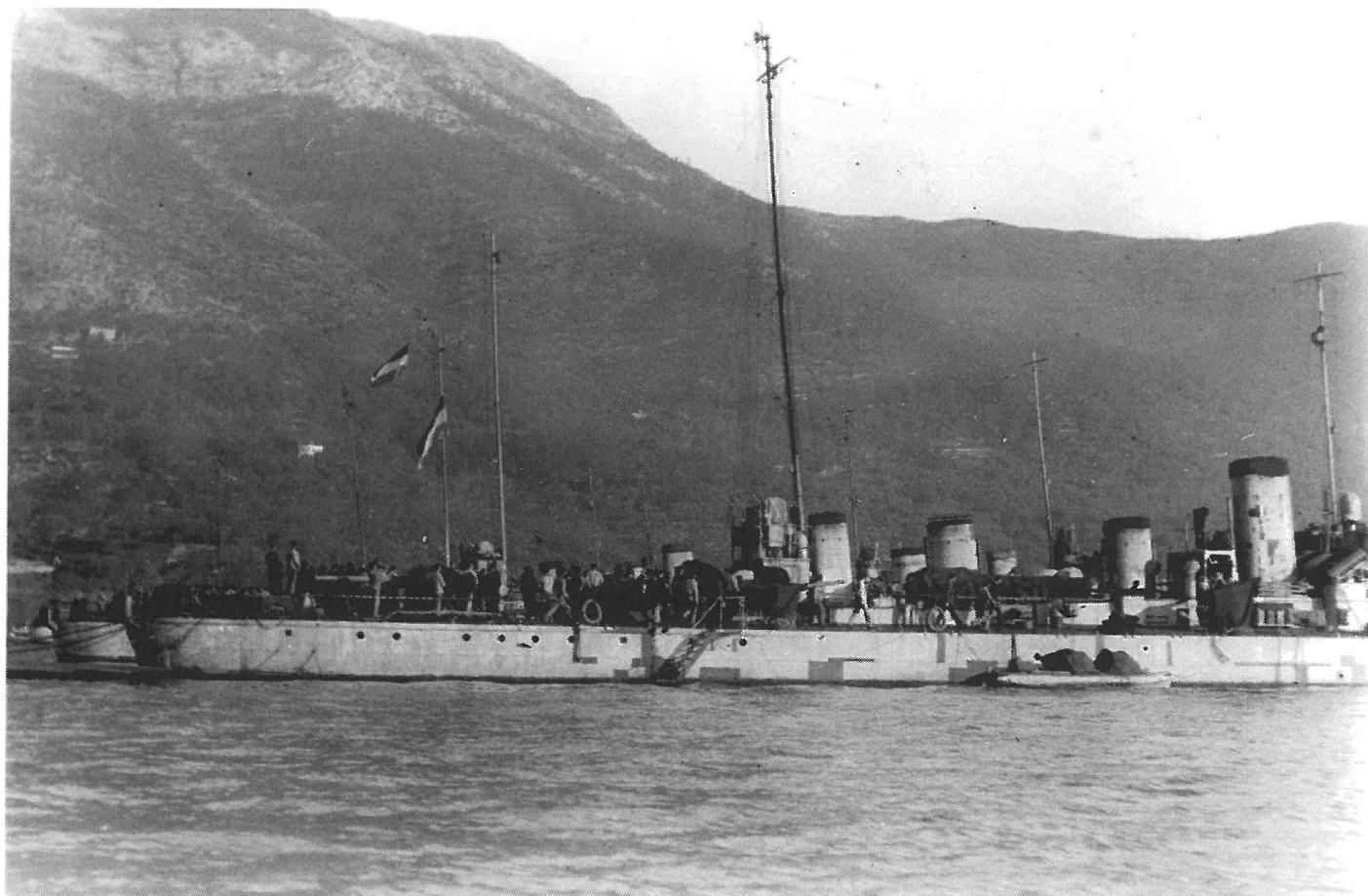
Lika escorted more convoys on 4/5, 6/7, and 23/24 November, and was on 29 November and 1 December waiting with **Tátra**, **Orjen**, and **Csepel** for returning A-H seaplanes in front of Boka. She was recalled to Pula on 2/3 December, was supporting seaplanes west from Brioni Islands, together with **Admiral Spaun**, **Dukla**, and three torpedo boats on 7 December, to be moved to Trieste with **Spaun**, **Triglav**, **Dukla**, **Turul**, **Streiter**, and **Scharfschütze** on 11/12 December. She sailed from Trieste on 19 December, to support the battleships **Árpád** and **Budapest** shelling Italian positions near Cortellazzo and was again in Pula on 23 December 1917. She was supporting seaplanes again on 4 February 1918, together with **Dukla**, **Streiter**, and torpedo boats **99** and **62**. This was repeated on 25 and 26 February. Between 1 March and 3 April 1918, she was in Pula, to be sent with **Saida**, the battleship **Erzherzog Karl**, and destroyers **Triglav** (II), **Uzsok**, and **Dukla** to Boka on 4 April. Underway **Lika** suffered rudder damage and used her reserve steering apparatus until the malfunction was fixed, arriving to Đenovići on 7 April. There followed the already mentioned encounter with British destroyers **Hornet** and **Jackal** during a raid on 22-24 April (see under **Triglav II**). The CO of **Lika** was at this time FK Friedrich von Poten. In the night of 17/18 May, **Lika** was in a scouting mission to the Drim Bay with **Triglav**, **Dukla**, and **Uzsok**, to return afterwards to Pula. On 10 June, she was waiting for seaplanes off Boka. During a patrol with **Dukla** off Cape Veslo on 11 August 1918, she lost her rudder at 1120 hours, and returned to Boka using her propellers for navigating, being assisted on the last leg of the way by **Tender 200** with torpedo boats **84** and **100**, being covered by the destroyer **Turul**. There followed a repair in Pula with the installation of a new rudder, and a return to Boka. On 11 September, after covering the retreat of A-H seaplanes, **Lika** assisted the stranded destroyer **Turul** (see there).



Destroyer *Lika* (II) photographed probably in Šibenik. (Pawlik)

On 29 September, and on 1 and 7 October, *Lika* was laying mines in the Drim Bay (with *Tátra*, *Dukla*, *Uzsok*, *Orjen*, *Satellit*, and torpedo boats *82*, *93*, *87*, and *100*), and on 10 October, during and after the retreat of the A-H land forces from Durazzo, she was escorting convoys from Albania. On 13 October, she assisted with other warships the damaged and stranded hospital ship *Oceania*.

During 1918, *Lika* (II) was escorting a total of eleven convoys, was seven times assisted A-H seaplanes, and once searching for mines. At the end of the war, she was stationed in Boka kotorska, and raised the Croatian flag on 1 November, but was soon seized by the French, to be later ceded to Italy and renamed *Cortellazzo* on 27 September 1920. In October 1920, she was towed by the Italian tug *Titano* to Messina, and by the tug *Luni* back to Pula in July 1921. She was repaired and rebuilt in Pula and Trieste, serving with the Italian fleet, from December 1928 onwards as the training ship of the machinery school in Venice, and was for a time stationed in Libya. From 1933 onwards, she served again as a training ship in Venice, absolving several training cruises. She was stricken on 5 January 1937 and scrapped in 1939.



Destroyers *Lika* (II) and *Triglav* (II) under Croatian flags in Boka on 1 November 1918. (Pawlik)

Destroyer **DUKLA** absolved her trials only on 13 October 1917, reaching the speed of 33.8 knots, but damages on her propellers were revealed. She was taken over on 7 November, and after new trials she arrived at Pula on 8 November. Her first CO was KK Albert Peter, succeeded later by FK Friedrich Buchmayer. On 19/20 November, **Dukla** took part at the raid along the Italian coast near the Po estuary, also on 28 November, as she was shelled by Italian coastal batteries off Rimini. She was waiting for A-H seaplanes west from Brioni on 7 December, to be transferred to Trieste on 11 December, and to take part at the attacks against Cortellazzo of 12 and 19 December, and to return to Pula on 21 December 1917. During 1917, she was once searching for mines.

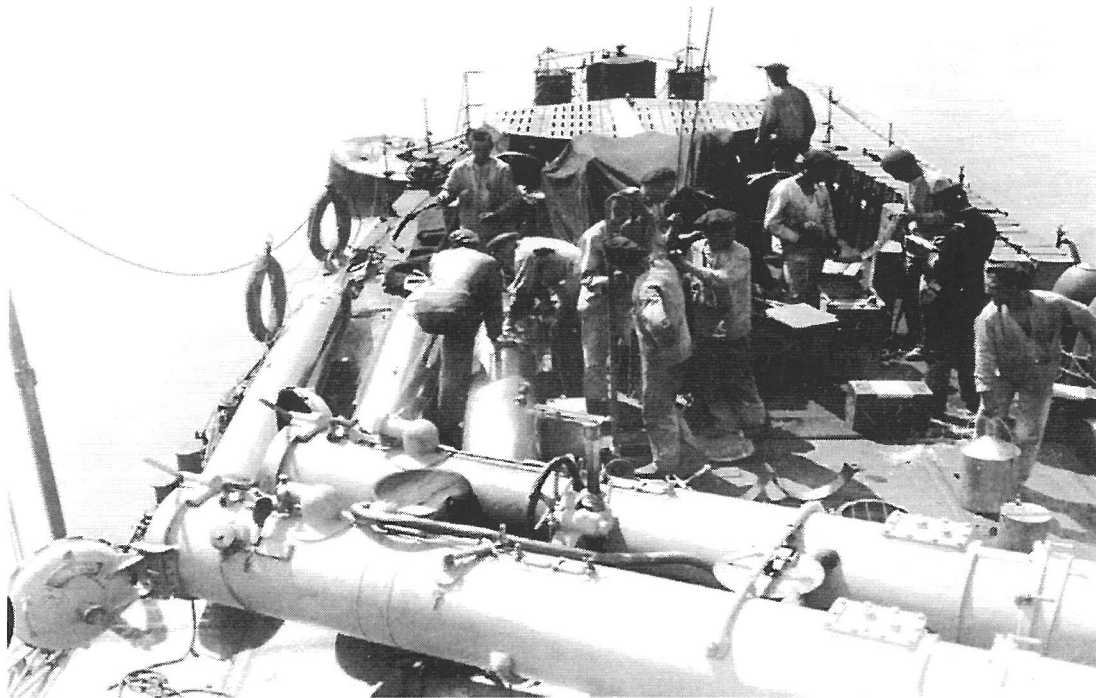
As **Dukla** was searching for the missing seaplane **K 380** on 25 February 1918, she was attacked at sea by enemy airplanes. On 4 April, she was sent from Pula to Boka, and on 22/23 April, she took part at the skirmish with the British destroyers **Hornet** and **Jackal** (see above). Her CO at this time was KK Viktor von Joly. On 12/13 May, with torpedo boats **84** and **98**, she escorted the steamer **Bregenz** to Durazzo, as the transport ship was torpedoed in shallow waters by the Italian motor torpedo boats **MAS 99** and **MAS 100**. **Bregenz** sank in two minutes, 234 people died and 969 were rescued, 19 of them by **Dukla**. On 17 May, she took part at the raid to Cape Laghi, and was in Boka on 10 June, during preparations for a large raid against the Otranto Barrage. She was to operate with the Support Group **b** (with the battleship **Prinz Eugen**, the destroyer **Uszok**, and torpedo boats **82**, **98**, **91**, and **95**). The raid was cancelled, and afterwards **Dukla** took part at the seaplane support mission on 2 August, being attacked from the air, and suffered one wounded under her crew. On 1 October she was laying mines in the Drim Bay, and on 7 October off Durazzo. In 1918, **Dukla** took part at 16 convoy escorting missions, twelve seaplane support missions, and one search for mines.

Dukla, the third vessel of the *Ersatz Triglav* class, photographed off Biograd. (Pawlik)

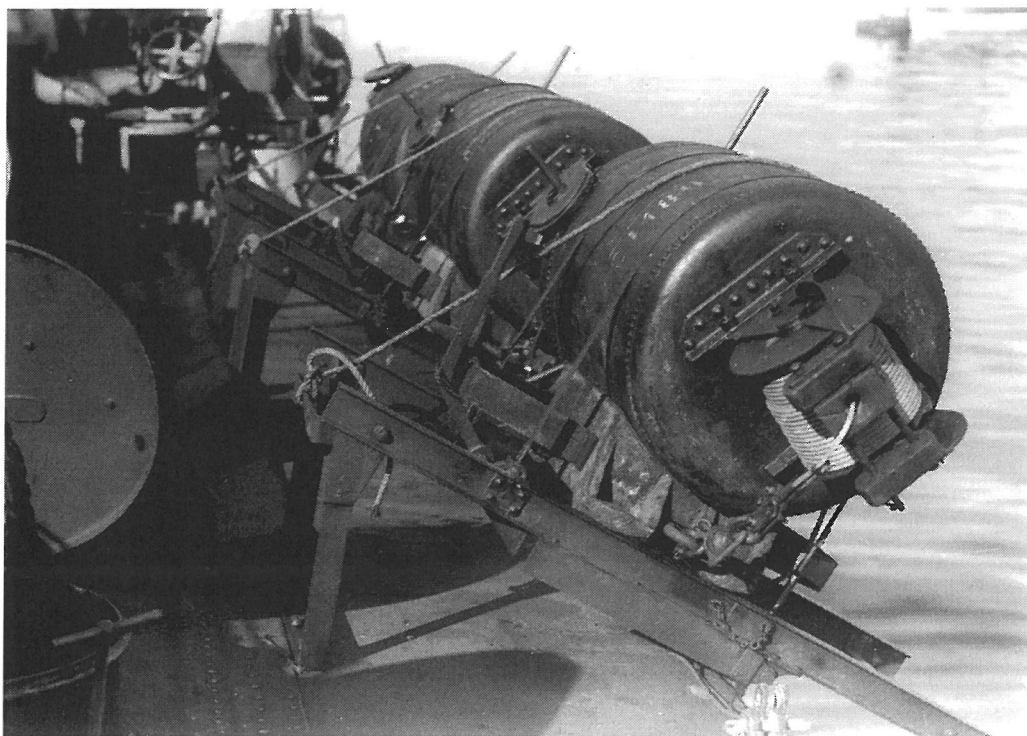


Coaling of *Dukla*. (Pawlik)

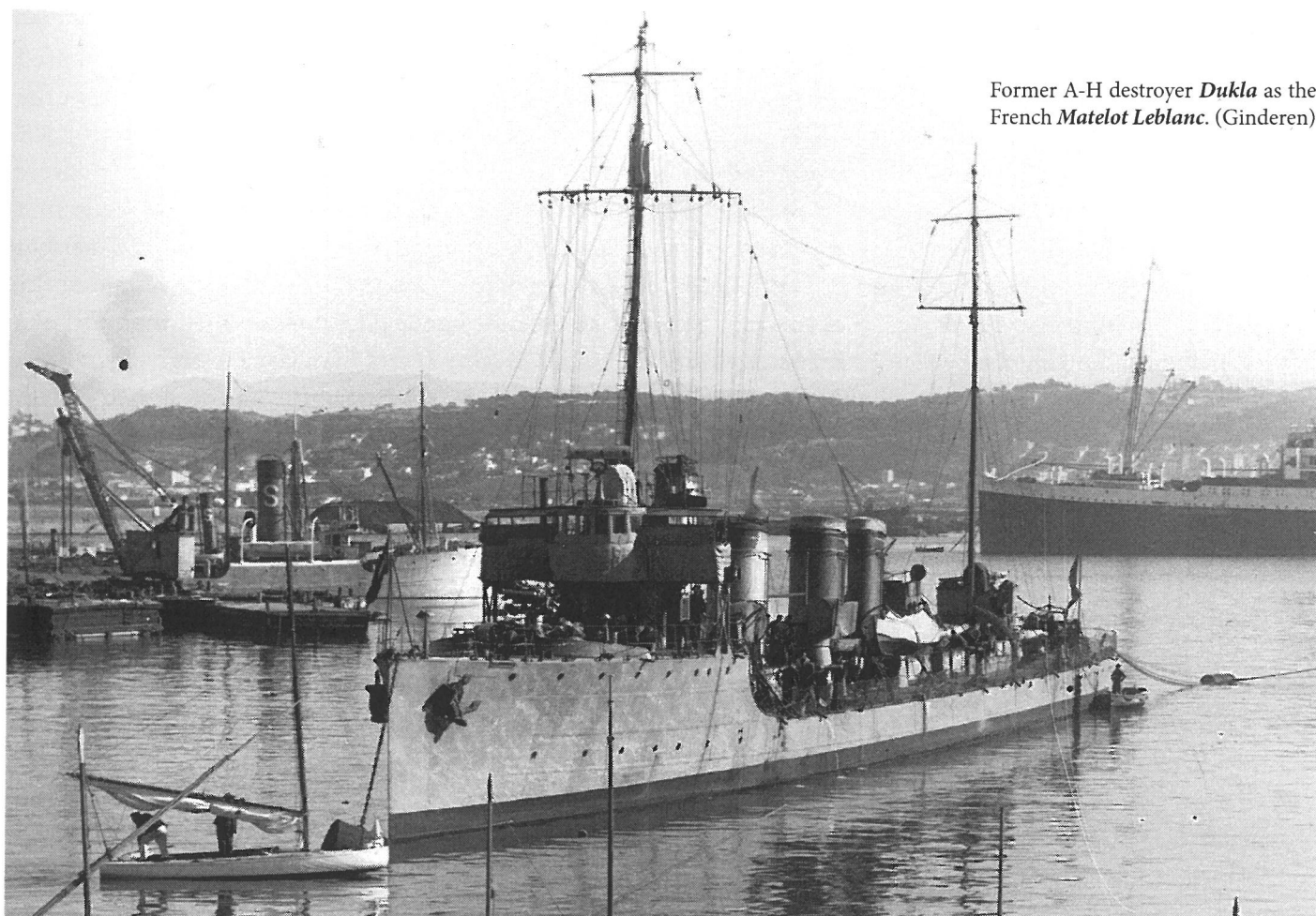
In late 1918, *Dukla* was commanded by FK Viktor von Joly, who at the same time commanded the destroyer *Orjen*. She was seized by the Allies, and ceded to France in January 1920, being renamed *Matelot Leblanc* (after a killed seaman from the submarine *Curie*, sunk off Pula in December 1914). After an overhaul, the destroyer went to trials in August 1921, to be transferred to Toulon afterwards. New repairs and modifications followed between January and April 1923, as some parts of equipment from the stricken Italian destroyers *Fasana* and *Zenson* (I) (ex-*Tátra* and ex-*Balaton*) were installed, but on 2 February 1924, the destroyer was declared as not fit for service. She was repaired again and commissioned in 1925, laying in Bizerte from 1928 onwards. She was stricken in 1936 and sold for scrap on 5 October of the same year.



Aft torpedo tubes of *Dukla*.
(Pawlik)



Mines on the stern on *Dukla*.
(Pawlik)

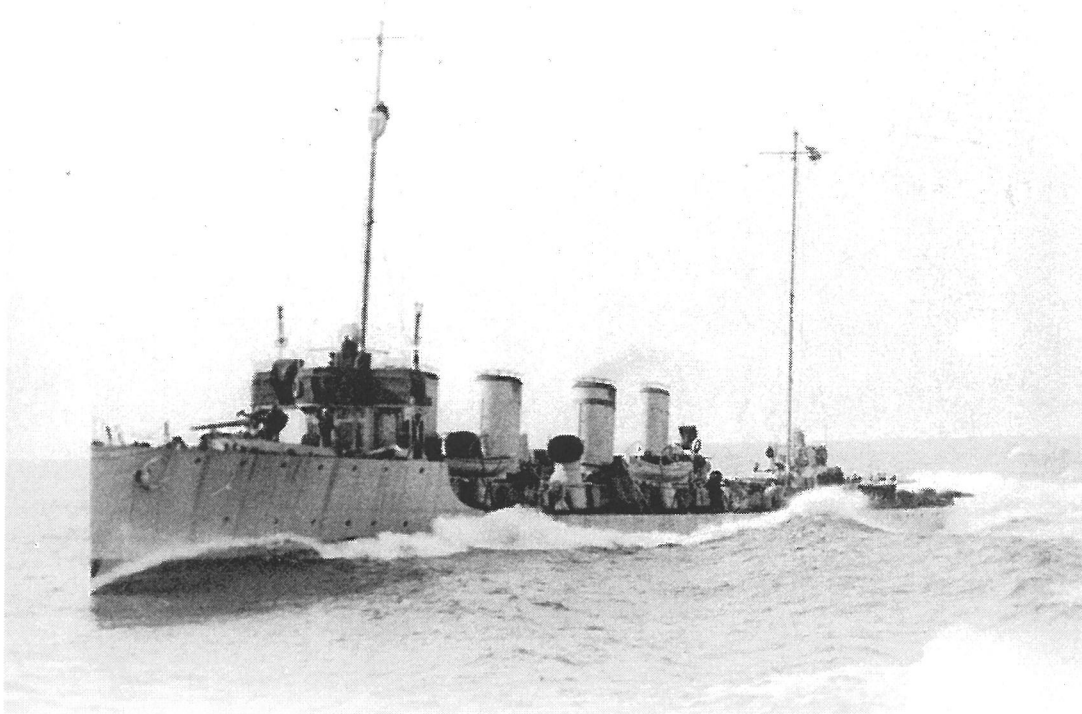


Former A-H destroyer *Dukla* as the French *Matelot Leblanc*. (Ginderen)



Raised forward funnel of *Matelot Leblanc* (ex-*Dukla*) could be better seen on this photo. (Wikipedia)

UZSOK⁴³ was commissioned on 18 December 1917, and the maximum speed of 33.36 knots was measured during trials on 22 December. Damages on original propellers delivered from Hamburg were discovered but the ship was in spite of this taken over by the A-H Navy. Her first CO was KK Karl Herkner, succeeded later by KK Karl Löwe. The destroyer was docked between 30 December 1917 and 20 January 1918, and her propellers were replaced by new ones. After new batch of trials on 21 January 1918, she returned to Pula, to take part at her first war operation, supporting seaplanes, on 20 February. On 25 February, she towed the seaplane **K 189** to Vrsar but was attacked by enemy aircraft, and the seaplane finally capsized and sank. On the same day, the rescue of the seaplane **L 129** went awry. **Uzsok** was docked again between 28 February and 4 April, and sailed then to Boka with other ships, escorting the battleship **Erzherzog Karl** (see under **Triglav II** and **Lika II**), and arriving at Boka on 7 April. She went to a sortie into the Otranto Straits on 22/23 April, taking part at the skirmish with British destroyers **Hornet** and **Jackal** (see above) but was not damaged during this encounter. **Uzsok** was at this time the only A-H destroyer having new tracer ammunition, what greatly facilitated the night shooting.

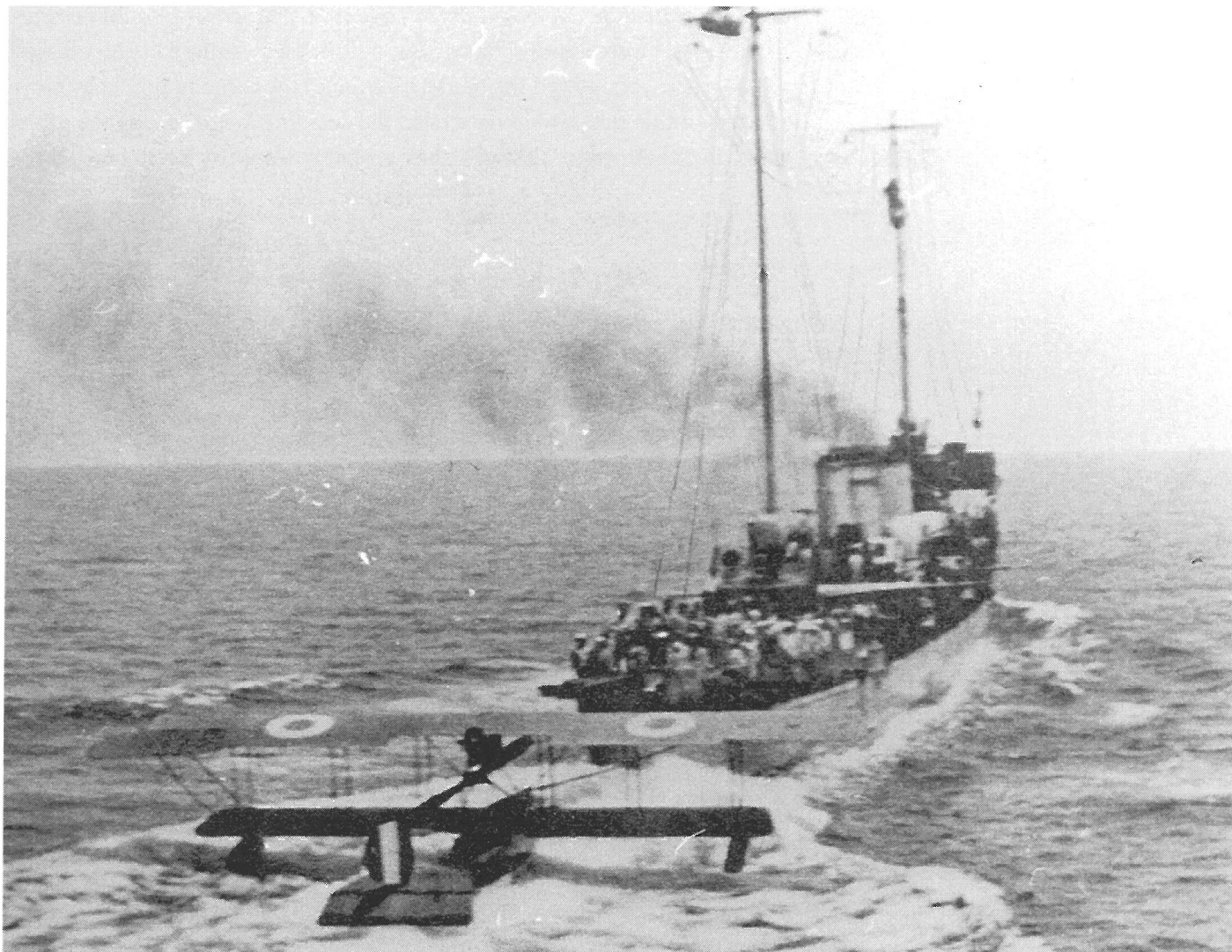


Destroyer **Uzsok**, the fourth unit of the *Ersatz Triglav* class. (Pawlik)

On 17/18 May, she took part at the raid to the Cape Mendores with other three vessels of the class, and was on sent to Slano 7 June, to search for one submarine. She was to take part at the large raid against the Otranto Barrage (with the Support Group **b**, also including the battleship **Prinz Eugen**, the destroyer **Dukla**, and torpedo boats), leaving Boka on 10 June, and as this operation was cancelled, she returned to Pula on 11 June. On 11 July, she took part at a seaplane support mission, and about 40 miles northeast from Bari she found the forcibly watered Italian seaplane **FBA No. 12**, captured her crew (two officers) and towed the plane to Boka. She was laying mines in the Drim Bay on 1 October, and off Durazzo on 7 October, to protect the stranded hospital ship **Oceania** on 13 October⁴⁴. During 1918, she took part at 19 convoy operations and was six times supporting seaplanes.

⁴³ Not to be confused with *Uskoke!*

⁴⁴ **Oceania** of the Austro-Americana shipping company was chartered for the A-H Navy in May 1918 as a hospital ship (*Spitalschiff V*); she hit a mine off Cape of Rodon on 4 October 1918, was stranded, and all personnel were rescued. All tries to tow the vessel away failed, and after salvaging the medical supplies and the inventory, she was finally destroyed by explosive charges on 15 October 1918.

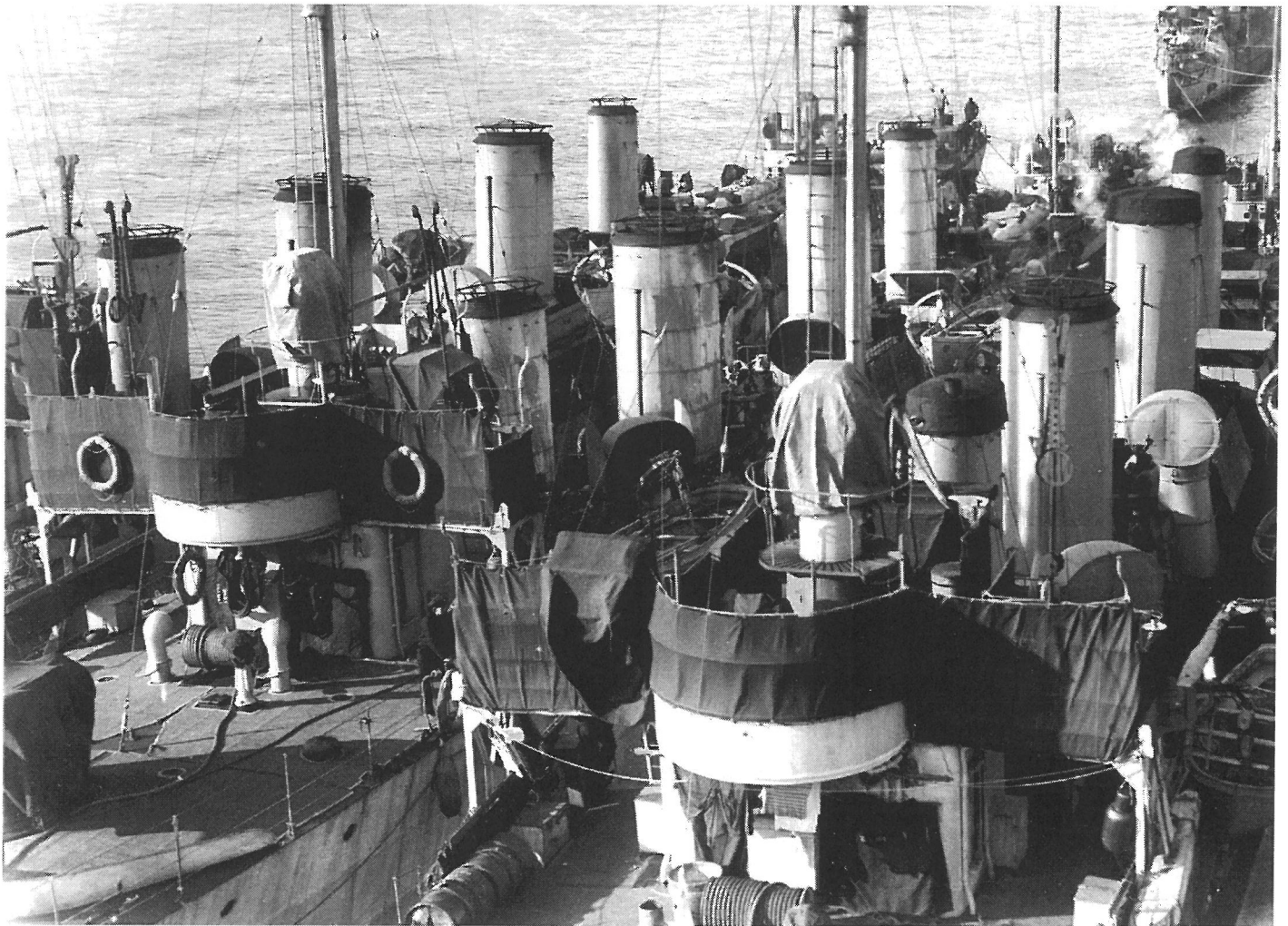


Uzsok towing the seized Italian seaplane *FBA No 12* on 11 July 1918. (Pawlik)

On 1 November 1918, *Uzsok* was staying in Boka, hoisting with other warships the Croatian ("South-Slav") flag, as the ships were ceded to the new S. H. S. State, but she was later seized by a British mission. She was officially ceded to Italy in 1920, to be commissioned for the Italian Navy on 27 September 1920 as *Monfalcone* and towed to Messina in November of the same year. In July 1921, she was towed from Messina to Pula, to be partially rebuilt in Pula and Venice. From 1925 onwards, she served with the local squadron, and later as a training ship of the Machinery School in Venice. She was transferred to Pula in 1928, to serve as a training ship and made several cruises with pupils in 1931 and 1932. During the Spanish Civil War, she was patrolling in the straits between Sicily and Africa, inspecting the merchant ships suspected to transport Soviet weapons and war materials for the Spanish revolutionary forces. She was stricken on 5 January 1939 and scrapped soon.

Four vessels of the *Ersatz Triglav* class were - like the *Tátra* class - very elegant vessels and represented a significant reinforcement for the A-H fleet, and it was a shame, that they were not built earlier, in 1914/15, as six additional vessels of the *Tátra* class were cancelled. All destroyers of these two classes took intensively part at naval operations, together with older destroyers of the *Huszár* class and four scout cruisers. It would certainly be more worthwhile to build destroyers and light cruisers than ironclads and *Dreadnoughts*, as the existing A-H battleships sailed out only three times

to larger operations, and the third was abruptly interrupted by the loss of *Szent István*. The destroyers would be completed more quickly, and unlike battleships, light vessels were almost daily at sea, but they also suffered bigger losses. The delay in construction of additional *Tátra* class destroyers slowed the modernization of the torpedo flotilla by more than two years. The total of ten or twelve destroyers of this class would have been the deciding factor during the initial war years in struggle with the Entente warships on the Adriatic, although they probably wouldn't have changed the final outcome.



Destroyers of the *Ersatz Triglav* class in Trieste in September 1917: from left to right *Triglav* (II), *Lika* (II), and *Dukla*. (Pawlik)

IMPROVED TÁTRA CLASS AND OTHER UNREALIZED PROJECTS

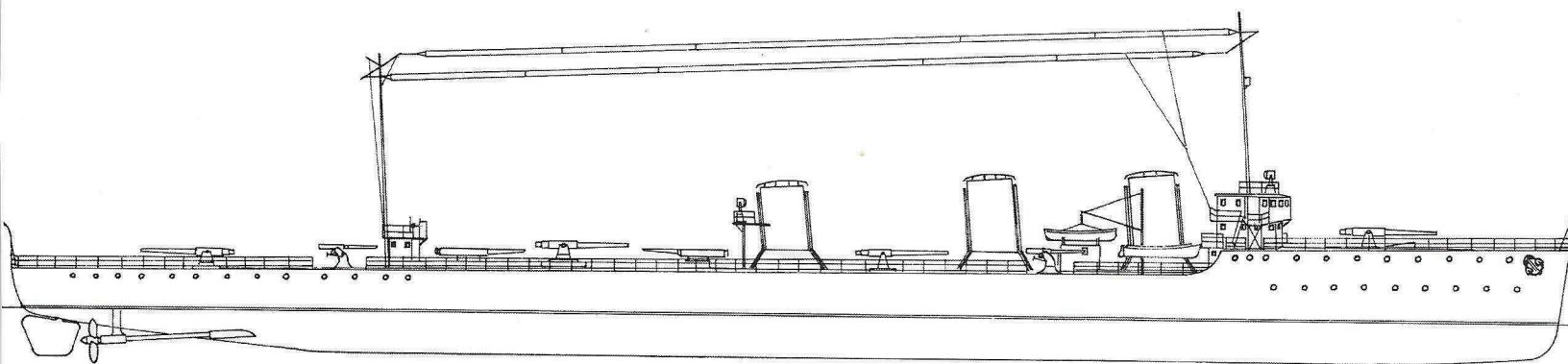
After first six destroyers of the *Tátra* class were completed, in spite of the second series being cancelled, the construction of improved ships of this type was contemplated. On 26 June 1917, the C-in-C of the Fleet, Admiral Maximilian Njegovan, demanded to build eight destroyers of the *Improved Tátra* class and twelve 300-tonnes torpedo boats as soon as possible. The Navy Section determined that at first only four destroyers of the *Improved* or *Reinforced Tátra* type (*Verstärkter Typ Tátra*) should be built, and the Danubius shipyard was asked for a concrete proposal, with hulls similar to the *Tátra* class. The MTK calculated that the material needed for construction of these ships (about 400 boxcars of steel from a total of 750 boxcars of material) should be delivered of soon as possible, in the second half of 1917, but that the financial means could be approved only in the first half of 1918. It was suggested to arm these vessels with two or three 12 cm (4.7in) L/45 and two 9 cm (3.5in) L/45 guns, to order the needer materials as soon as possible, without waiting for approval by two parliaments (the Austrian and the Hungarian). The Danubius shipyard submitted the offer for four destroyers only on 8 November 1917, with each ship with a price tag amounting 8.15 million crowns, about four times more than the first *Tátra* class ships, and twice as much as the *Ersatz Triglav* vessels. The MTK calculated that the weight of three 12 cm and two 9 cm guns would be too great and would negatively affect the speed of the vessels. Thus only two 12 cm and four 7 cm (66 mm) L/50 guns were to be mounted, two of the latter in the anti-aircraft mountings, as the 9 cm guns were seen as too heavy for destroyers. The Navy Section approved this decision.

On 10 November 1917, the Danubius shipyard ordered some of the needed building materials, and the definitive order was signed on 22 December 1917. The ships were to displace 880 tonnes as designed, to attain the speed of 32.5 knots, were to be similar to the *Tátra* class, and to have the identical propulsion (two AEG-Curtis steam turbines), but their Yarrow water-tube boilers were to be exclusively oil-fired. The ships were to be delivered 14 to 18.5 months after the official begin of construction (at the delivery of first batch of needed material to the shipyard). The final contract was confirmed on 4 July 1918, and in mid-August, the Danubius shipyard asked the first rate of 9.5 million crowns to be paid, after the first 300 tonnes of material was delivered to the shipyard. In fact, only 215 tonnes of material reached Rijeka, but the machine factory Danubius in Budapest has also bought steel for turbines in worth of 340 thousand crowns, thus the first rate was paid. It could be assumed that the construction of these destroyers did not start before the end of the war, while neither the data about further deliveries of material to the shipyard nor about the official begin of the work could be found in State Archives in Vienna. The MTK archives in Pula disappeared during Italian occupation, like a part of the archives of the former Danubius in Rijeka.

Improved Tátra type – tactical and technical data

Displacement	Design displacement 880 tonnes.
Dimensions	Length over all 85.28 m, beam 7.80 m, draught 2.40 – 3.20 m.
Propulsion	Steam turbines with 20,500 hp.
Speed	32.5 knots.
Armament	Two 12 cm L/45, four 7 cm L/50 guns, four 45 cm torpedo tubes (2 x 2).
Complement	Unknown.

Still earlier, during construction of the original *Tátra* class in March 1914, the construction of twice as large flotilla leaders with 1,600 tonnes was contemplated. The Navy Section in Vienna found out that the Higher Shipbuilding Engineer Johann Fiala from MTK was working independently on a project for a large destroyer and asked the insight in his plans. On 18 March 1915, the MTK submitted the study for a 35-knot destroyer, and several other shipyards sent their offers, like the Blohm & Voss from Hamburg, the Danubius from Rijeka, and the Austria-Werft (the former S. T. T.) from Trieste. On 11 July 1917, the MTK issued a memorandum regarding new destroyers that were to displace at least 2,000 tonnes, as other navies were building large destroyers as well. The torpedo boats should have no less than 1,000 tonnes. New A-H destroyers were to be a mix of torpedo boats and light cruisers, like the newest German torpedo boats⁴⁵. The design submitted by Blohm & Voss for a destroyer with 1,600 – 1,915 tonnes, armed with four 15 cm (5.9in) guns was rejected immediately, as not meeting the conditions, and the first Danubius study represented a ship with a displacement of 1,600 – 1,915 tonnes, armed with four 12 cm and two 9 cm guns, with four 53,3 mm (21in) torpedo tubes, and with a speed of 37 knots. The MTK worked on two projects, one with 1,500 – 1,900 tonnes, and another with 2,000 – 2,350 tonnes. Danubius sent another study for destroyers with 2,272 – 2,448 tonnes, and Austria-Werft two projects for vessels with full load displacement of 2,240 and 2,650 tonnes respectively.



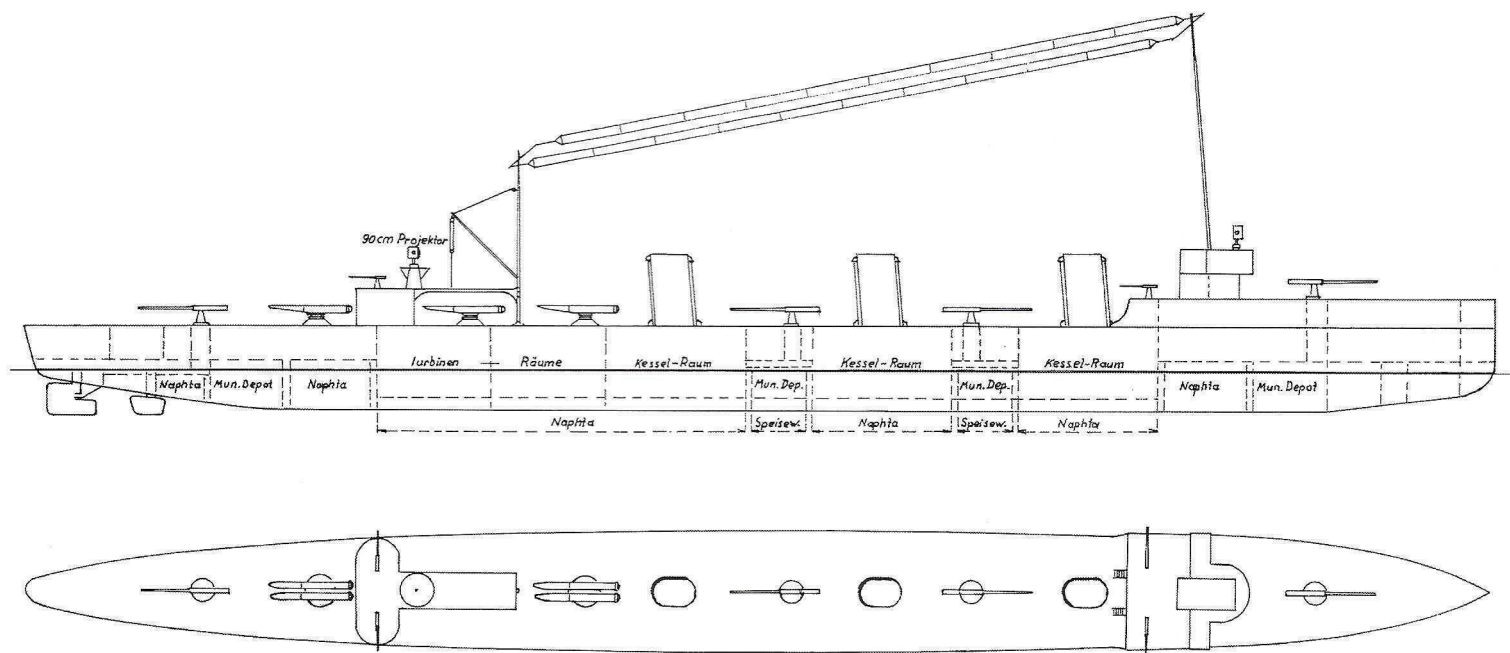
Danubius project for a 2,000-tonnes destroyer from 1917. (Bilzer)

The MTK set two requirements: 1) for construction of eight 2,000-tonnes destroyers and twelve 1,000-tonnes torpedo boats, and 2) for construction of twenty 1,000-tonnes torpedo boats. On 27 January 1917, LSKpt Franz Lauffer, chief of the Second Group of the Navy Section, suggested the building of twelve torpedo vessels (destroyers) armed with two 15 cm or three 12 cm guns, and LSKpt Cicoli, Chief of the Operations Sections, was suggesting building twenty-four destroyers with 1,500 to 2,000 tonnes displacement, with great range and being armed with 15 cm guns. LSKpt Millenković was against the building of destroyers and suggested the construction of forty (!) 1,000 torpedo boats armed with 15 cm guns. Finally there surfaced the proposal to build 1,900-tonnes flotilla leaders, 1,000-tonnes destroyers, and 500-tonnes torpedo boats, and this occurred at the time when the war was nearing its end, and the already ordered destroyers of the *Improved Tátra* class could not be built.

⁴⁵ German Imperial Navy called its destroyers torpedo boats (*Torpedoboote*) to the end of the war, in spite of having more than 2,000 tonnes displacement and 5.9in guns.

Projects for large destroyers from 1916 to 1918

Project	Design and full load displacement	Armament (t.t.= torpedo tubes)	Propulsion, output (hp)	Speed (knots)	Range (miles/ knots)	Dimensions (m)
MTK, 17/3/1916	1,500 – 1,900 tonnes	Six 10 cm or four 15 cm, two 8 mm mg's, four 53.3 cm t.t.	Turbines, two shafts, 36,000	35 / 34	950/34 or 3000/16	110 x 9.5 x 2.9
Blohm & Voss, June 1916	1,320 – 1,780 tonnes	Four 15 cm, four 8 mm, six 53.3 cm t.t.	Turbines, two shafts, 40,700	35 / 33	790/33 or 3000/18	95.9 x 9.35 x 2.8
Danubius, 16/3/1917	1,600 – 1,915 tonnes	Four 12 cm or two 15 cm, two 9 cm, four 53.3 cm	Six oil-fired boilers, two turbines, 41,000/36,000	37.5 / 34	680/34	109.6 x 9.4 x 3.0
MTK, October 1917	2,000 – 2,350 tonnes	four 15 cm, four 7 cm, two 8 mm, six x 53.3 cm t.t.	Turbines, two shafts, 43,000	37 / 34	770/34 or 3400/16	124 x 10 x 3.2
Danubius, 18/4/1918	2,272 – 2,448 tonnes	Four 15 cm, four 10.5 or 9 cm, two 8 mm, four 53.3 mm t.t.	Six oil-fired boilers, two or four shafts, 43,000 hp	34	680/34 or 3000/16	122.4 x 10.2 x 3.4 – 4.3
Austria-Werft, Projekt A, June 1918	2,440 (full load) tonnes	Three 15 cm, four 9 cm, four 53.3 cm t.t.	Parne turbine, 46 000 KS	34	-	-
Austria-Werft, Projekt B, June 1918.	2,650 (full load) tonnes	four 15 cm, four 9 cm, four 53.3 cm t.t.	Steam turbines, 49,000	34	-	-



MTK project for a 2,000-tonnes destroyer. (Bilzer)

In the Vienna State Archives only the drawings of a Danubius study for large destroyers were preserved, with a design displacement of 1,271.5 tonnes, the displacement of 1,615 tonnes with one half of supplies (water and ammunition) on board, 1,915 tonnes with the full load of ammunition and half load of oil, and with the full load displacement reaching 2,093 tonnes. The hull was to be 109.6 m long, with a beam of 9.4 m, and the draught of 3.0 m, and was to be divided by 19 transverse bulkheads into 20 watertight compartments. The ships were to be armed with four 12 cm L/45 or two (anti-aircraft!) 15 cm L/50 guns, together with two 9 cm anti-aircraft guns and four 53.3 cm (21in) torpedo tubes. The steam produced by six oil-fired boilers was to supply two turbines, with the total output of 40,000 hp (30,147 kW) for the maximum speed of 37.5 knots, or 34 knots at full load. With 341 tonnes of oil, the ships could steam at 36,000 hp for 16 hours, but for the operations on the South Adriatic they were to carry 740 tonnes of oil; with additional 245 tonnes of oil, they could operate in the Mediterranean as well. The total amount of 985 tonnes of oil was somehow too much for a 1,271.5 tonnes vessel.

The building costs for these 2,000-tonnes large destroyers or flotilla leaders rose to 13.5 million Crowns for each vessel (about 2.7 million US Dollars in 1917/18). First vessel was to be completed only in 1921, in fact three years after the Austro-Hungarian Monarchy disappeared from the world's maps.

The very last plans of the A-H Navy - that hoped for an extraordinary loan of 380 million Crowns, but only for the vessels that could be completed fast - included the construction of twelve large 1,000-tonnes submarines, and twenty destroyers, eight of these of the smaller and twelve of the larger type. Smaller destroyers from this program (from December 1917) were to be replaced by destroyers of the *Improved Tátra* type and thus a full circle was made, to return to the plans from 1916. For two of these vessels the names *Honved* (Hungarian soldier) and *Lovćen* (the mountain in Montenegro, dominating Boka kotorska, and finally seized early in 1916) were often mentioned, but there are no official documents confirming this. Guns for the first four ships were ordered from Skoda in Pilsen, and were allegedly ready to be delivered, together with turbines being built in Budapest, but the end of the war and the collapse of the Monarchy prevented the realization of all these plans.

The *Tátra* class and its derivatives were interesting and successful designs, in spite of the fact that the destroyers were armed with two gun calibers, but this was the case in other navies as well. Most foreign destroyers were armed with 10 cm (3.9in), 10.2 cm (4in), or 10.5 cm (4.1in) guns, with additional 3in guns or 12-pounders, and only the newest flotilla leaders (Italian, British and German) were armed with 12 cm (4.7in) or 15 cm/15.2 cm (5.9in of 6in) guns. The 6in shells were too heavy to be handled on smaller and "lively" warships like destroyers. The 4.7in shells were efficient enough against destroyers and torpedo boats, and even against light cruisers. It is of interest that the A-H shipbuilders were contemplating to arm their ships with a strong anti-aircraft artillery suite, a consequence of many air attacks at sea and in harbor. Even the 15 cm guns were to be used against air targets.

CONCLUSIONS

Austria-Hungary was as a world's naval power obliged to have a battle fleet, as in the late 19th and early 20th Century, ironclads and modern battleships – *Dreadnoughts* – were a criterion of strength for each power, even if it was a land and not a sea power. The A-H battlefleet served as a deterrent force during the World War One, and its presence prevented enemy landings on the Adriatic coast. She left harbor only at three occasions: on 7 August 1914, to meet the German Mediterranean division with *Goeben* and *Breslau* (that proceeded to Turkey instead to the Adriatic), on 23/24 May 1915, to attack the Italian coastal cities, and early in June 1918, to support the (cancelled) raid at the Otranto Barrage. In contrast to the battlefleet, light forces, like fast cruisers, destroyers, and torpedo boats (together with submarines) were very active, being almost daily at sea.

As first Austro-Hungarian destroyers were designed and constructed, their role was to protect larger vessels from torpedo attacks by enemy destroyers and torpedo boats. Later they were to engage submarines and aircraft as well, and served finally as convoy escorts, searched for mines, supported their own fragile seaplanes returning from their missions, and attacked the enemy maritime traffic, and the vessels of the Otranto Barrage (that tried to prevent the sorties of the German and A-H submarines to the Mediterranean and back). In hindsight, it would have been better to build more modern destroyers (and larger torpedo boats) before and early during the war, but that was not clear, as destroyers were then having only the secondary role. The destroyers of the *Tátra* (and *Ersatz Triglav*) class were with older units of the *Huszár* class, and with scout cruisers of the *Spaun* and *Improved Spaun* classes, bearing the brunt of all Adriatic operations. The consequences of the ill-fated decision to cancel the additional *Tátras* as the war broke out are already mentioned and well known. Today we know that destroyers were the “working horses” of the fleet during both world wars and afterwards, and no maritime operations could be carried through without them. The destroyers (and frigates) of today are more complex and something quite different from the destroyers of the era described here, but their role remained mainly the same. Already in 1914-18, the naval war on the Adriatic was led in “3-dimensions”, against surface targets, submarines, and aircraft as well. The A-H Navy was perhaps late in realizing these facts but reacted fast and efficient. Even the old destroyer-forerunners were efficient, as there were no other ships of this kind available for secondary duties.



Destroyers *Triglav* (II), *Lika* (II), *Dukla*, and *Streiter* in Pula on 31 December 1917. (Pawlik)

ABBREVIATIONS

a-a = anti-aircraft

A-H = Austro-Hungarian

BAG = *Ballonabwehrgeschütz*: anti-aircraft gun (in original: anti-balloon gun)

CC = *Capitano di corvetta* (Italian) = Commander j. g.

CF = *Capitano di frigata* (Italian) = Commander

C. N. T. = *Cantiere Navale Triestino*, Monfalcone = shipyard in Monfalcone

CV = *Capitano di vascello* (Italian) = Captain

FK = *Fregattenkapitän* = Commander

FLt = *Fregattenleutnant* = Lieutenant

HMS = His (Her) Majesty Ship

hp = horse powers (1 kW = 1.36 hp)

I & R = Imperial and Royal (Austro-Hungarian)

iR = in der Reserve = Navy Reserve (officer)

KK = *Korvettenkapitän* = Commander j. g.

KLt = *Korvettenleutnant* = Sub-Lieutenant (the rank used in the A-H Navy for the reserve naval officers transferred from the merchant navy only: KLt iR = *Korvettenleutnant in der Reserve*)

KM = *Kriegsministerium*: War Ministry

Kts = Knots: speed of the ship in nautical miles or miles per hour (1 mile=1,852 m). 30 kts = 55.56 km/h.

K. u. k. / *Kaiserlich und königlich* = Imperial and Royal (common institutions of the Austro-Hungarian Monarchy, like the Common Army, Navy, Foreign Ministry...)

kW = Kilowatt (1 hp = 0.735 kW)

L/30, L/45 etc. = length of a gun barrel in calibers: a 66 mm L/30 barrel was 1.98 m long, and the 66 mm L/45 barrel was 2.97 m long.

LSKpt = *Linienschiffskapitän* = Captain

LSLt = *Linienschiffsleutnant* = Lieutenant-Commander (LtCdr)

LtCdr = Lieutenant Commander

LV = *Lieutenant de vaisseau* (French) = Lieutenant-Commander

MAS or M. A. S. = *motoscafo armato SVAN* or *motoscafo anti-somergibile* or *motoscafo armato, silurante* = armed motor boat built by the SVAN company from Venice, or anti-submarine boat, or motor torpedo boat.

mg = machine-gun

MS = *Marinesektion* = Navy Section (of the War Ministry)

MTK = *Marine-technisches Komitee* = Naval technical Committee

NM or M = nautical mile (1,852 m)

QF = quick-firing (gun)

S. H. S. = there are two meanings: initially for the State of S. H. S. (of Slovenes, Croatians, and Serbs) up to 1 December 1918, as this state was united with the Serbian Kingdom, and afterwards for the Kingdom of S. H. S. (of Serbs, Cro-
atians, and Slovenes).

SMS = *Seiner Majestät Schiff* = His Majesty Ship

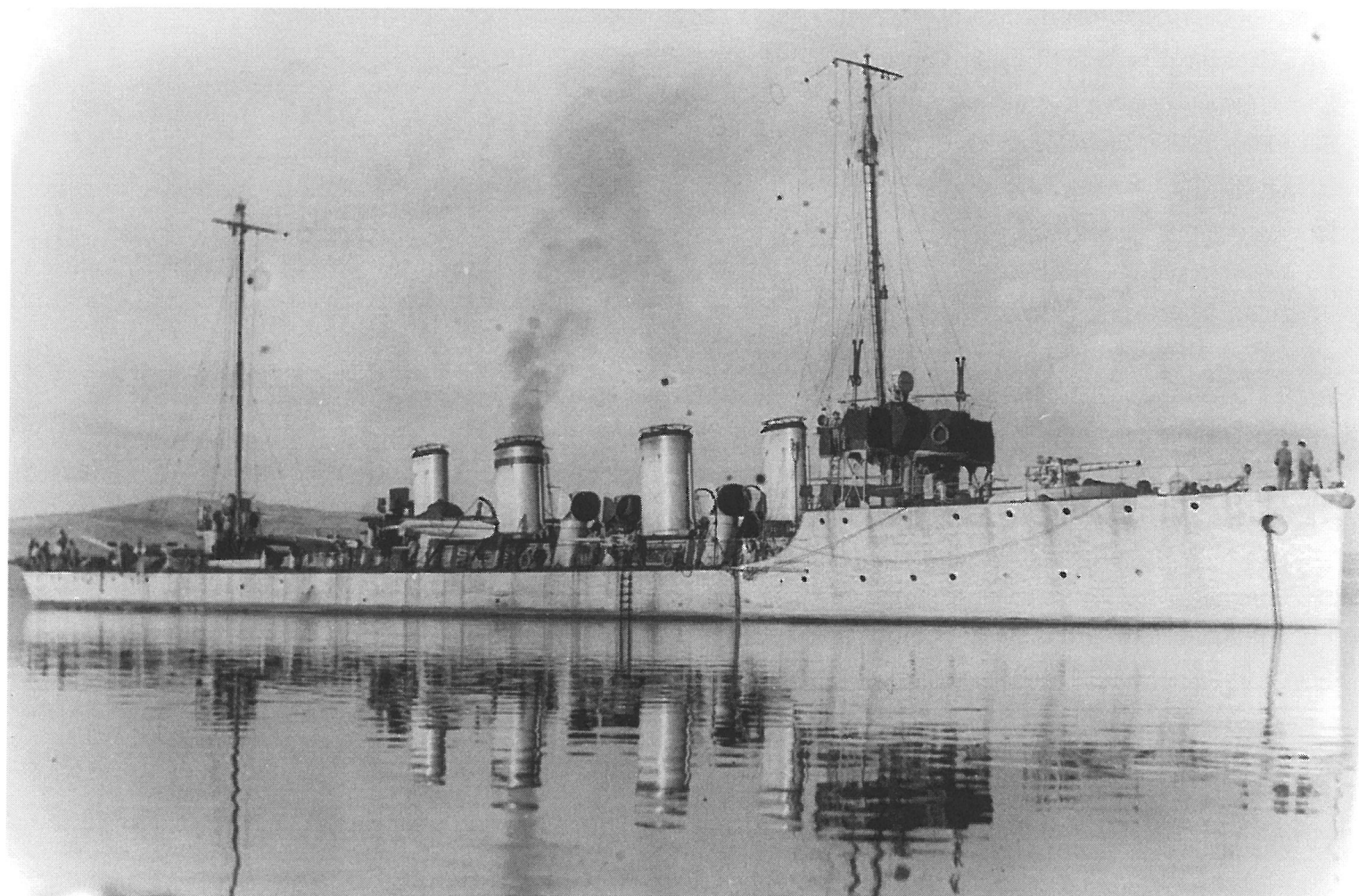
S. T. T. = *Stabilimento Tecnico Triestino* = shipyard in Trieste

TAG = *Torpedobootsabwehrgeschütz* = anti-torpedo boat gun

TB, TBs = torpedo boat, torpedo boats

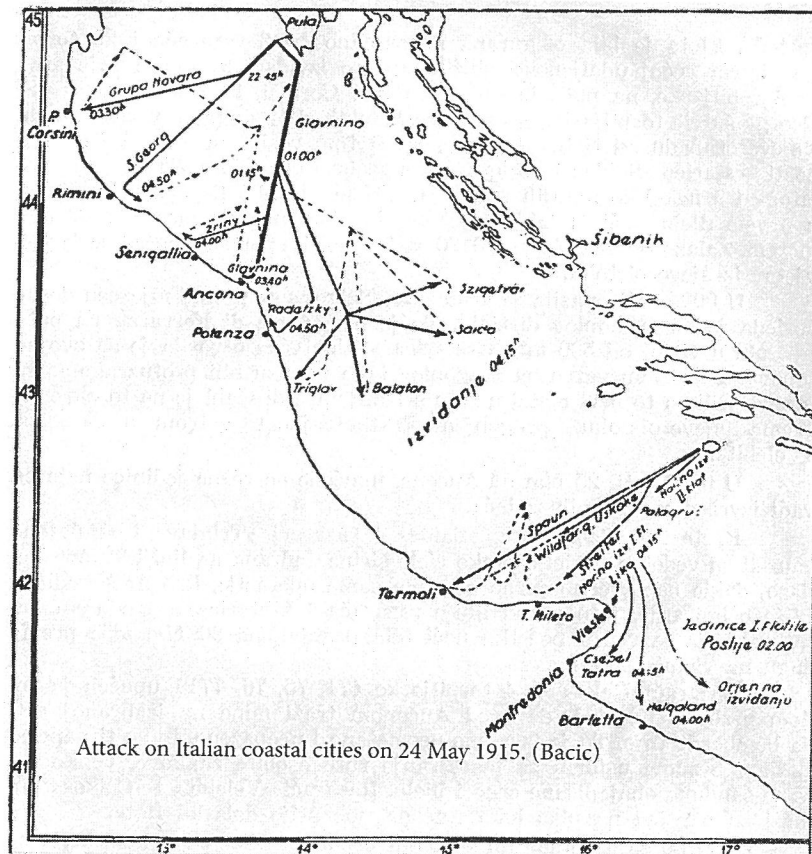
t.t. = torpedo tube (in tables)

TV = *Teniente di vascello* (Italian) = Lieutenant-Commander



Destroyer *Dukla* of the *Ersatz Triglav* class in April 1918. (Pawlik)

SOME SIGNIFICANT OPERATIONS WITH A-H DESTROYERS TAKING PART



Group A, attack on Ancona: 2nd Battleship Squadron (*Habsburg*/Flagship, *Árpád*, *Babenberg*; *Erzherzog Karl*, *Erz. Friedrich*, *Erz. Ferdinand Max*), 1st Battleship Squadron (*Viribus Unitis*, *Tegetthoff*, *Prinz Eugen*, *Erzherzog Franz Ferdinand*), destroyers *Dinara*, *Csikós*, *Velebit*, *Reka*, torpedo boats 74 T, 75 T, 76 T, 57 T, 58 T, 60 T, 62 T, 82 F, 63 T, 67 T, 68 F, 50 E, 51 T, 53 T, 54 T, 69 F, 72 F, three seaplanes.

Group B, attack on Senigallia: battleship *Zrinyi*, torpedo boats 4 and 7.

Group C, attack on Potenza: battleship *Radetzky*, torpedo boats 56 T and 73 F.

Group D, attack on Rimini: armored cruiser *Sankt Georg*, torpedo boats 1 and 2.

Group E, attack on Porto Corsini: cruiser *Novara*, destroyer *Scharfschütze*, TBs 78 T, 79 T, 80 T, 81 T.

Group F, scouting south of the fleet: cruisers *Saida* and *Szigetvár*, destroyers *Balaton* and *Triglav*.

Group G, attack on Barletta: cruiser *Helgoland*, destroyers *Csepel*, *Tátra*, *Orjen*, *Lika*.

Group H, attack on Termoli: cruiser *Spaun*, destroyers *Wildfang*, *Streiter*, *Uskoke*.

Österreich-Ungarn



Kreuzer „Helgoland“

Länge: 131m
 Wasserverdrängung: 3500t
 Fahrgeschwindigkeit: 29kn
 Armierung: 9 10cm L/50, 2 53cm Doppel-Torp.Lanz.-Rohre



Torp.-Boots-Zerst. „Csepel“, „Balaton“, „Tátra“, „Lika“, „Triglav“
 (letzte zwei vor d. Seegefecht gesunken)

..... 84m
 850t
 32kn
 2 10cm L/50, 6 7cm L/50, 2 53cm D.T.L.R.

England – Italien – Frankreich



Engl. Leichte Kreuzer „Dartmouth“, „Weymouth“

Länge: 131m
 Wasserverdrängung: 5250t
 Fahrgeschwindigkeit: 25kn
 Armierung: 8 152cm L/50, 4 47cm, 2 Unterwasser-
 -lanzierrohre



Ital. Leichte gesch. Kreuzer „Quarto“

..... 126m
 3480t
 28kn
 6 12cm L/50, 6 76, 2 LR, 1 47cm



„Nino Bixio“

..... 131m
 3600t
 25.5kn
 6 12cm, 6 76cm, 2 LR



Französ. T.B.Z. „Casque“, „Bisson“, „Rénaudin“
 „Commandant Lucas“, „Commandant Bory“

Länge: 77–78m
 Wasserverdrängung: 744t 800t
 Fahrgeschwindigkeit: 24kn
 Armierung: 2 10cm, 4 65cm, 2 LR



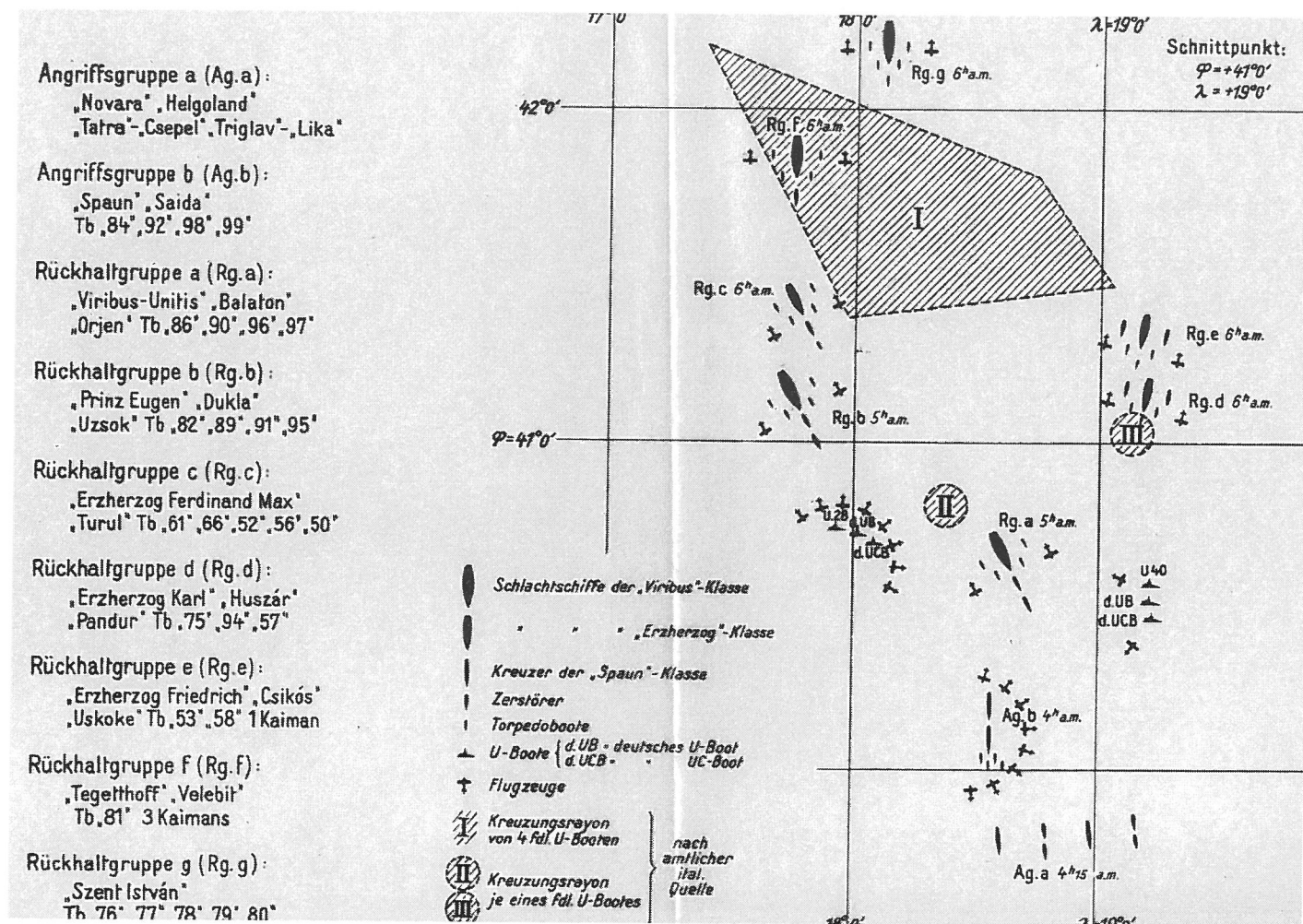
Italien. Torpedobootszerstörer „Giuseppe Abba“, „Ippolito Nievo“, „Antonio Mosto“, „Rosolino Pilo“

..... 73m
 770t
 32kn
 6 76cm 2 LR

Kräftevergleich

	Tonnengehalt	Artillerie								Summe
Österreich-Ungarn	6050t	—	—	15	10cm	—	18	7cm	—	33 Geschütze
Entente	24.600t	16	15cm	12	12cm	10	10cm	36	76cm	20 65cm 94 "

Power ratio between the A-H and enemy warships on 29 December 1915 (Sokol)



Plan of the raid against the Otranto Barrage in June 1918 (Sokol)

Attack Group a: *Novara, Helgoland, Tatra, Csepel, Triglav, Lika*

Attack Group b: *Spaun, Saida, TBs 84, 92, 98, 99*

Support Group a: *Viribus Unitis, Balaton, Orjen, TBs 86, 90, 96, 97*

Support Group b: *Prinz Eugen, Dukla, Uzsok, TBs 82, 89, 91, 95*

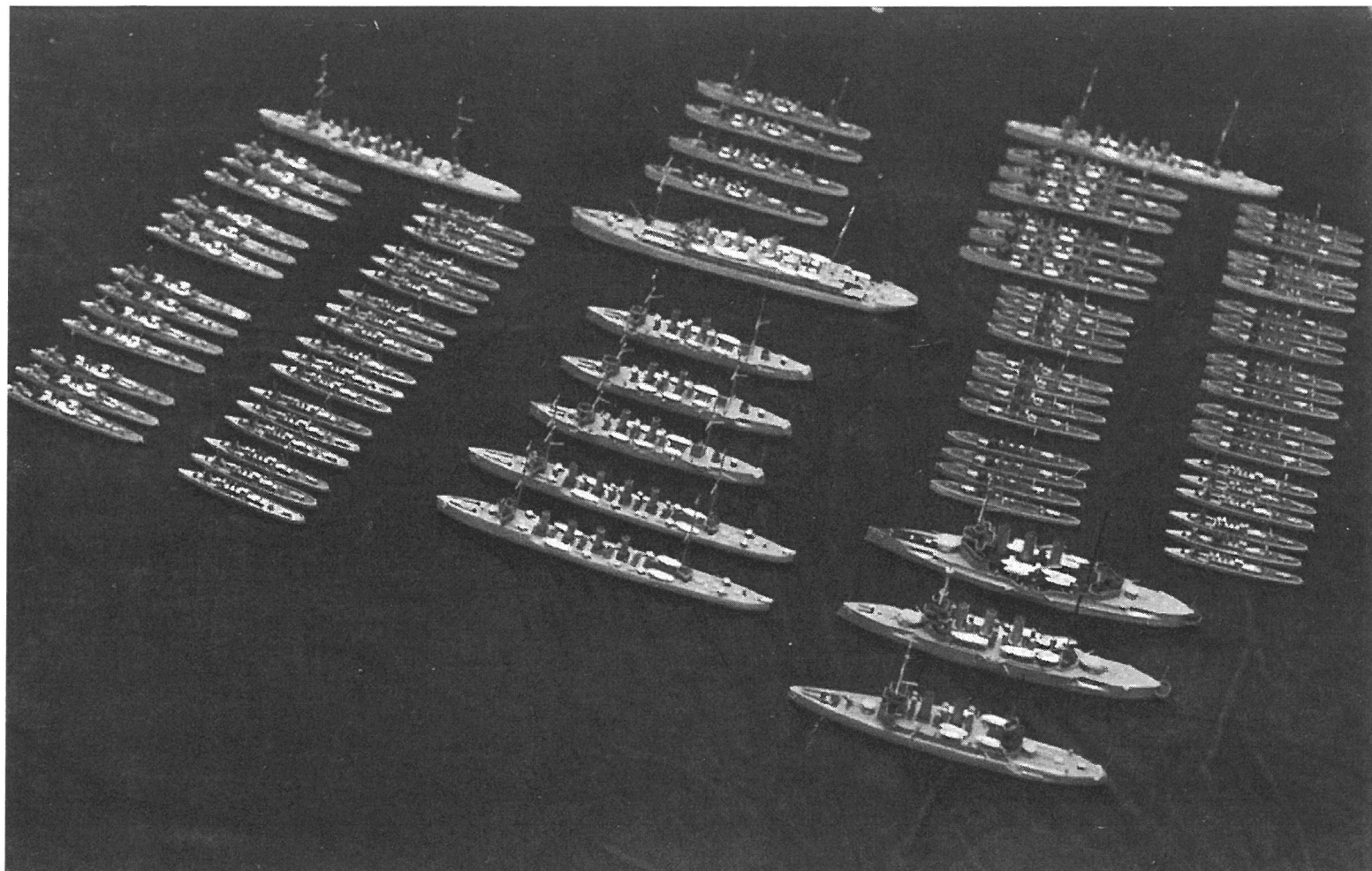
Support Group c: *Erz. Ferdinand Max, Turul, TBs 61, 66, 52, 56, 50*

Support Group d: *Erz. Karl, Huszar, Pandur, TBs 75, 94, 57*

Support Group d: *Erz. Friedrich, Csikos, Uskoke, TBs 53, 58 and another Kaiman*

Support Group f: *Tegetthoff, Velebit, TB 81 and three Kaimans*

Support Group g: *Szent Istvan, TBs 76, 77, 78, 79, 80.*



Austro-Hungarian Cruiser Flotilla reproduced by Mr. Boris Pleić from Rijeka: on the left the light cruiser **Admiral Spaun** with the 2nd Torpedo Flotilla (with destroyers of the *Huszár* class and torpedo boats of the *Kaiman* class); in the middle four destroyers of the *Ersatz Triglav* class with the torpedo depot ship **Gäa**, three cruisers of the *Zenta* class and two scout cruisers; on the right the cruiser **Helgoland** with the 1st Torpedo Flotilla (with destroyers of the *Tátra* class and 250-tonnes torpedo boats), and in the foreground three armored cruisers. (Pleić)

ATTACHMENTS:

ATTACHMENT I: *ORDRE DE BATAILLE* OF THE OPERATIONAL A-H FLEET, AS ON 27 JULY 1914

BATTLE FLEET:

C-in-C Admiral Anton Haus was embarked with his Staff up to 24 August 1914 on the Yacht *Lacroma*, and later on the battleship *Viribus Unitis*.

I. Squadron:

1st Division: battleships *Viribus Unitis*, *Tegetthoff*, *Prinz Eugen*.

2nd Division: battleships *Erzherzog Franz Ferdinand*, *Radetzky*, *Zrinyi*.

II. Squadron:

3rd Division: battleships *Erzherzog Karl*, *Erz. Friedrich*, *Erz. Ferdinand Max*,

4th Division: battleships *Habsburg*, *Árpád*, *Babenberg*.

CRUISER FLOTILLA:

1st Cruiser Division:

armored cruisers *Sankt Georg* (Flagship), *Kaiser Karl VI.*, *Kaiserin und Königin Maria Theresia*,
cruisers *Szigetvár*, *Zenta*, *Aspern*.

1st Torpedo Flotilla: cruiser *Saida* (Leader)

1st Torpedo Division:

1st Destroyer Group: *Csepel*, *Tátra*, *Balaton*,

2nd Destroyer Group: *Lika*, *Orjen*, *Triglav*.

2nd Torpedo Division:

3rd Destroyer Group: *Velebit, Dinara, Reka,*

4th Destroyer Group: *Csikos, Scharfschütze, Pandur.*

3rd Torpedo Division:

1st TB Group: *74 T, 76 T, 77 T, 75 T* (250-tonnes TBs),

2nd TB Group: *50 E, 51 T, 73 F* (TBs of the *Kaiman* class)

3rd TB Group: *53 T, 54 T, 56 T* (TBs of the *Kaiman* class)

2nd Torpedo Flotilla: cruiser *Admiral Spaun* (leader)

4th Torpedo Division:

5th Destroyer Group: *Turul, Wildfang, Huszar,*

6th Destroyer Group): *Streiter, Ulan, Uskoke*

5th Torpedo Division:

4th TB Group: *68 F, 55 T, 70 F* (*Kaiman* class)

5th TB Group: *61 T, 65 F, 66 F* (*Kaiman*-class)

6th TB Group: *64 F, 69 F, 72 F* (*Kaiman* class)

6th Torpedo Division:

7th TB Group: *52 T, 58 T, 59 T* (*Kaiman* class)

8th TB Group: *60 T, 62 T, 63 T* (*Kaiman* class)

9th TB Group: *57 T, 67 F, 71 F* (*Kaiman* class).

Torpedo depot ships for both T-Flotillas: *Gäa* and *Dampfer IV* (*Steamer IV*).

FLEET TRAIN (SUPPLY VESSELS):

Repair ship *Cyclop*, Yacht *Lacroma*, tanker *Vesta*, water tender *Najade*, salvage ship *Gigant*, torpedo vessel *Meteor*, Steamer Nos. *I – III, V – IX, XI* and *XII* for ammunition, provision, coal und lubricating oil, depot ships for nets and other boom materials.

For the defense of several coastal districts the 5th Heavy Division was responsible (with the ironclads *Monarch, Wien, Budapest*), together with the 2nd Cruiser Division (*Kaiser Franz Joseph I., Panther*), and the guard ship *Mars* (ex-*Tegetthoff*). In several harbors other older destroyers, guard ships, and hulks were stationed, to serve for the local defense, as the:

7th Torpedo Division with the 7th Torpedo Vessel Group (*Planet, Trabant, Satellit*), 11th TB Group (with TBs *1, 2, 7, 9*) and the 13th TB Group (with TBs *21, 24, 32, 39*).

The submarines were subordinated to the *Submarine Starion*, with active submarines *I, II, III, IV, V* and *VI*, being renumbered later *1* through *6* (or *Ub. 1* through *Ub. 6*).

Several old torpedo boats, torpedo vessels, and ships served for sweeping mines and inspecting minefields in local naval districts (Pula, Trieste, Lošinj, Šibenik, and Boka kotorska).

ATTACHMENT II: *ORDRE-DE-BATAILLE* ON 20 MARCH 1917

Operational Fleet, C-in-C Admiral Maximilian Njegovan

- I. Squadron, 1st Division: *Viribus Unitis, Tegetthoff, Prinz Eugen, Szent István*
 2nd Division: *Erz. Franz Ferdinand, Radetzky, Zrinyi*
- II. Squadron, 3rd Division: *Erz. Karl, Erz. Friedrich, Erz. Ferdinand Max*
 4th Division: *Habsburg, Árpád, Babenberg*

Cruiser Flotilla: *Sankt Georg* (Flagship), *Kaiser Karl VI.*, *Szigetvár, Aspern, Novara, Saida*

- 1st Torpedo Flotilla: *Helgoland* (leader)
- 1st Torpedo Division, 1st Destroyer Group: *Csepel, Tatra*
 3rd Destroyer Group: *Orjen, Balaton*
- 3rd Torpedo Division, 1st TB Group: *74, 77, 79, 81*
 3rd TB Group: *76, 75, 78, 80*
- 5th Torpedo Division, 5th TB Group: *83, 87, 97*
 7th TB Group: *93, 85, 96*
7. Torpedo Division: 9th TB Group: *99, 88, 100*
 11th TB Group: *92, 84, 94*
9. Torpedo Division: 13th TB Group: *86, 91, 90*
 15th TB Group: *89, 82, 95*
11. Torpedo Division: 17th TB Group: *50, 53, 73* (*Kaiman* class)
 19th TB Group: *51, 54, 56* (*Kaiman* class)
- 2nd Torpedo Flotilla: Light cruiser *Admiral Spaun* (leader)
- 2nd Torpedo Division: 2nd Destroyer Group: *Csikós, Dinara, Pandur*
 4th Destroyer Group: *Scharfschütze, Reka, Velebit*
- 4th Torpedo Division: 6th Destroyer Group: *Huszar, Wildfang, Warasdiner, Turul*
 8th Destroyer Group: *Uskoke, Streiter, Ulan*
- 6th Torpedo Division: 2nd TB Group: *68, 55, 70*
 4th TB Group: *72, 69, 64*
8. Torpedo Division: 6th TB Group: *57, 58, 59*
 8th TB Group: *60, 62, 63*

10. Torpedo Division: 10th TB Group: **61, 65, 66**

12th TB Group: **52, 67, 71**

(All torpedo boats of the 2nd Torpedo Flotilla were of the *Kaiman* class).

Torpedo Depot Ships *Gäa* and *Dampfer IV*.

Fleet Tain: Headquarters Ship *Cyclop*, coalers *Pola* and *Teodo*, tanker *Vesta*, water tender *Najade*, salvage ship *Gigant*, steamer Nos. **5, 7, 11, X** (Hospital ship).

Submarine Flotilla: Submarines *Ub. 1, 2, 4, 5, 10, 11, 14, 15, 17, 27, 29, 30*.

The ships of the local defense were mainly the same as in 1914, but the old destroyers *Meteor*, *Planet*, *Trabant*, and *Satellit* formed the 9th Destroyer Group of the 16th Torpedo Division, responsible for defense of Pula and other units of the Division were the 26th, 27th, 28th, and 29th TB Group, with new TBs **1, 3, 6, 7, 9** and older TBs **21, 24, 32, 39, 20**, and **23**.

For defense of Lošinj served the old destroyer *Magnet* as the leader of the 13th TB Division with the 21st TB Group (with new torpedo boats **2** and **4**).

For defense Šibenik was responsible the 14th Torpedo Division with *Komet* and the 22nd and 23rd TB Group with new and older torpedo boats **8, 10, 11, 12, 14, 19, 22, 25**, and **31**.

Stationed in Boka was the 15th Torpedo Division with the old destroyer *Blitz* and two TB Groups, the 24th with TBs **13** and **15**, and the 25th with boats **16** and **17**.

ATTACHMENT III: FLEET ORGANIZATION ON 26 AUGUST 1918

Fleet:

C-in-C: Rear-Admiral Nikolaus Horthy de Nagybánya

1st Division: *Viribus Unitis, Tegetthoff, Prinz Eugen*

2nd Division: *Erzherzog Franz Ferdinand, Radetzky, Zrinyi*

Cruiser Flotilla:

3rd Heavy Division: *Erzherzog Karl, Erz. Friedrich, Erz. Ferdinand Max*

Cruiser Group: *Novara, Saida*

1st Torpedo Flotilla: *Helgoland, Tatra, Balaton, Csepel, Orjen, Lika, Triglav, Dukla, Uzsok,*

250-tonnes torpedo boats from 76 to 100, and *Kaiman* class boats Nos. 73, 51, 52, 56, 54, and 50.

2nd Torpedo Flotilla: *Admiral Spaun, Dinara, Reka, Pandur, Csikós, Scharfschütze, Velebit, Turul, Uskoke, Ulan, Huszár, Warasdiner*, all other TBs of the *Kaiman* class (Nos. 72, 69, 70, 55, 68, 55, 68, 64, 57, 60, 58, 62, 59, 63, 52, 66, 65, 61, 71, and 67),

Torpedo depot ship *Gäa*, Ship for special purposes (accommodation ship) *Budapest* (ironclad).

(In 1918 there was no special *Ordre-de-Bataille* for the torpedo flotillas)

Fleet Train: *Teodo, Pola*, Steamer No. 14.

Submarines *Ub. 1, 2, 4, 5, 10, 11, 14, 15, 17, 21, 22, 27, 28, 29, 31, 32, 40, 41, 43, 47.*

Anti-Submarine Flotilla (armed coastal steamers) *Monfalcone, Tatra, Knin, Senj, Arsa, Makarska, Nesazio, Cetina, Novi*, and *Slavija*.

Ships for the local and coastal defense as in years before.

ATTACHMENT IV: CROATIAN AND FORMER ITALIAN (VENETIAN) GEOGRAPHIC NAMES

Croatian name	Former Italian (Venetian) name
Bakar	Buccari
Bar	Antivari
Biševo	Busi
Boka Kotorska	Bocche di Cattaro
Brač	Brazza
Cavtat	Ragusa Vecchia
Cres	Cherso
Crna gora	Montenegro
Drač	Durazzo (Albanian Durrës)
Dubrovnik	Ragusa
Dugi otok	(Isola) Grossa
Đenovići	Gjenović
Fažana	Fasana
Gruž	Gravosa
Hercegnovi	Castellnuovo
Hvar	Lessina
Ist	Isto
Istra	Istria
Iž	Eso
Izola	Isola
Kalafat	Albanese
Karlobag	Carlopagò
Korčula	Curzola
Kornat	Isola Incoronata
Kornati	Isole Incoronate
Kotor	Cattaro
Kraljevica	Porto Rè
Krk	Veglia
Kvarner	Quarnero
Kvarnerić	Quarnerello
Lastovo	Lagosta
Lošinj	Lussin
Lovran	Laurana
Mali Lošinj	Lussin piccolo
Medova, Sv. Ivan medovanski	Medua (Albanian: Shëngjin)
Mljet	Meleda
Novigrad	Cittanova
Opatija	Abbazia
Osor	Ossero
Pag	Pago

Palagruža	Pelagosa
Pašman	Pasman
Pelješac	Sabbioncello
Poreč	Parenzo
Portorož	Portorose
Premantura	Promontore
Primošten	Ocesto
Pula	Pola
Rab	Arbe
Rijeka	Fiume
Rovinj	Rovigno
Savudrija	Salvore
Senj	Zengg
Šibenik	Sebenico
Silba	Selve
Split	Spalato
Susak	Sansego
Sušac	Cazza
Svetac, Sv. Andrija	San Andrea
Sv. Ivan na pučini	S. Giovanni in Pelago
Tivat	Teodo
Trogir	Trau
Učka	Monte Maggiore
Ugljan	Ugliano
Umag	Umago
Valona	Valona (Albanian Vlorë)
Veli Lošinj	Lussin grande
Vis	Lissa
Zadar	Zara

ATTACHMENT V: RANKS OF NAVAL OFFICERS IN 1914 – 1918, WITH ABBREVIATIONS

Austria-Hungary	France	Italy	Germany	United Kingdom
Großadmiral	-	-	Großadmiral	Admiral of the Fleet
Admiral	-	Ammiraglio	Admiral	Admiral
Vizeadmiral (VA)	Vice-Amiral (VA)	Vice-Ammiraglio (VA)	Vizeadmiral (VA)	Vice-Admiral (VA)
Kontreadmiral (KA)	Contre-Amiral (CA)	Contraammiraglio (CA)	Konteradmiral (KA)	Rear-Admiral (RA)
Linien Schiffskapitän (LSKpt)	Capitaine de vaisseau (CV)	Capitano di vascello (CV)	Kapitän zur See (KzS)	Captain (over 3 service years as Cpt.) (Capt)
Fregattenkapitän (FK)	Capitaine de fregate (CF)	Capitano di fregata (CF)	Fregattenkapitän (FK)	Captain (up to 3 service years as Captain)
Korvettenkapitän (KK)	Capitaine de corvette (CC)	Capitano di corvetta (CC)	Korvettenkapitän (KK)	Commander (Cdr)
Linien Schiffleutnant (LSLt)	Lieutenant de vaisseau (LV)	Tenente di vascello (TV)	Kapitänleutnant (KpLt)	Lieutenant (LT); after 8 service years: Lieutenant-Commander (LtCdr)
Fregattenleutnant (FLt)	Enseigne de 1ère classe (E1c)	Sottotenente di vascello (sTV)	Oberleutnant zur See (OltS)	Lieutenant (Lt) (up to 8 service years)
Korvettenleutnant in der Reserve (KLT i.R.)*	Enseigne de 2ième classe (E2c)	Guardiamarina (GM)	Leutnant zur See (LtS)	Sub-Lieutenant (sLt)
Seefähnrich (SF)	Aspirant de Marine (Asp)	Aspirante (Asp)	Fähnrich zur See (FzS)	Midshipman (Ms)
Seekadett (SK)	Eleve de l'école navale (Een)	Allievo di marina (Am)	Seekadett (SK)	Naval Cadet (NC)

* This rank was used in the A-H Navy only for the Reserve Officers taken over from the Merchant Navy.

ATTACHMENT VI: GUNS AND MACHINE-GUNS OF THE A-H TORPEDO VESSELS AND DESTROYERS

Caliber & Length in calibers	Model and year of introduction	Weight of the gun (mounting) and shell (kg)	Muzzle velocity (m/sec)	Elevation	Range (at an elevation of ..°)	Rounds per minute	What ships or classes	Notices (exact caliber in mm and inches, material)
15cm/35	Krupp C/80, 1880	4,770 (8,420) & 32-39	635	+15°/-5°	7,400	.	<i>Lussin</i>	150 mm, 5.9in
12cm/35	Krupp C/80, 1880	2,000 (2,300) & 23.75	535	+15°/-6°	7,000	.	<i>Panther, Leopard, Tiger</i>	120 mm, 4.7in
12 cm/45	Skoda, 1914	3,050 & 23.8	800	unknown	15,000	unknown	<i>Improved Tátra</i>	120 mm, 4.7in
10 cm/50	Skoda K/11, 1911	2,020 (2,730) & 13.75	900	+14°/-4°	8,000	10	<i>Tátra, Ersatz Triglav</i> classes	100 mm, 3.9in
9 cm/24	Arsenal, 1875	487 (867) & 6.36-7.15	448	+25°/-25°	4,500	.	<i>Zara, Spalato</i>	87 mm, 3.4in (from steel-bronze*)
7 cm/15	Arsenal, 1875	90 (224) & 2.9-3.1	298	+18°/-30°	3,100	.	<i>Zara, Spalato</i>	66 mm, 2.6in (from steel-bronze*)
7 cm/42	Skoda, 189?	630 (+1,530) & 6.5 (4)	700	+20°/-10°	6,000	.	<i>Planet, Trabant</i>	66 mm, 2.6in
7cm/45	Skoda K/97, 1897 & K/09, 1909	547 (1,860) & 5.0	725	+20° -10°	6,000	.	<i>Panther, Huszár</i> and <i>Tátra</i> -classes	66 mm, 2.6in
7 cm/30	Skoda TAG, 1910	Total 788 & 5.78	.	+25°/-14°	5,000 /12°	.	<i>Huszár</i> after the 1st modernization	66 mm, 2.6in
7 cm/30	Skoda BAG, 1910	Total 1,074 & 5.78	.	+90°/-5°	7,000 /25°	.	<i>Huszár</i> after the 2nd modernization	66 mm, 2.6in
47mm/25	Hotchkiss, 1884	550 (750) & 1.5 (1.1)	.	+20°/-20°	3,000	20	<i>Zara</i> and other ships	5-barrel revolver machine-gun
47mm/33	Hotchkiss, 1890	120 (300) & 1.5 (1.1)	.	+23°/-23°	2,400	.	<i>Zara</i> and other ships	Elastic mounting
47mm/44	Skoda und Hotchkiss, 1897 und ?	240 (710) & 1.5 – 2.75	825	+20°/-10°	4,000	.	<i>Panther, Huszár</i> and other classes	47 mm, normal recoil mounting
25 mm	Palmkrantz/Nordenfeldt, 1884	193 (443) & 0.33 (0.207)	.	+15°/-35°	unknown	.	<i>Zara</i> and other ships	25.4 mm/1in, 4-barrel machine-gun
8 mm	Schwarzlose, M.07/12, 1912	19.9 & ...	620	unknown	unknown	400	Various ships	Anti-aircraft machine-gun

*From gunmetal, with a steel jacket.

ATTACHMENT VII: TORPEDOES OF THE A-H TORPEDO SHIPS, TORPEDO VESSELS, DESTROYERS AND TORPEDO BOATS

Caliber and Type	Quantity	Year of introduction	Length (m)	Caliber in mm and inches	Explosive charge (kg)	Mass of torpedo (kg)	Pressure (atm)	Range (m) at speed (knots)	What ships or classes
35 cm, Typ C	224	1886/87	4.5	356/14	45	275	85	600 / 24	TBs, <i>Panther</i> , <i>Meteor</i>
40 cm	60	1888/91	5.1	406/16	97	435	85	600 / 25-27	<i>Planet</i> , <i>Trabant</i>
45 cm L/4	21	1892	4.03	450/17.7	89	432	90	400/28 or 800/26	<i>Satellit</i>
35 cm Typ D *	36	1903-07	4.55	356/14	45	350	150	800/27 or 1000/26	<i>Meteor</i> , <i>Blitz</i> , <i>Komet</i>
45 cm L/5	190	1905/06	5.12	450/17.7	95	644	150	3,000/32.5 and 6,000/19.5	<i>Huszár</i> and <i>Kaiman</i> (TBs)
45 cm L/5	175	1909/15	5.2	450/17.7	110	654	150	5,000/33.5 and 10,000/19.5	<i>Huszár</i> and <i>Kaiman</i>
45 cm L/5	341	1912/14	5.5	450/17.7	110	772	150	1,000/42 and 6,000/27	<i>Tátra</i>
45 cm L/5	32	1916	5.57	450/17.7	182	852	150		<i>Ersatz Triglav</i>

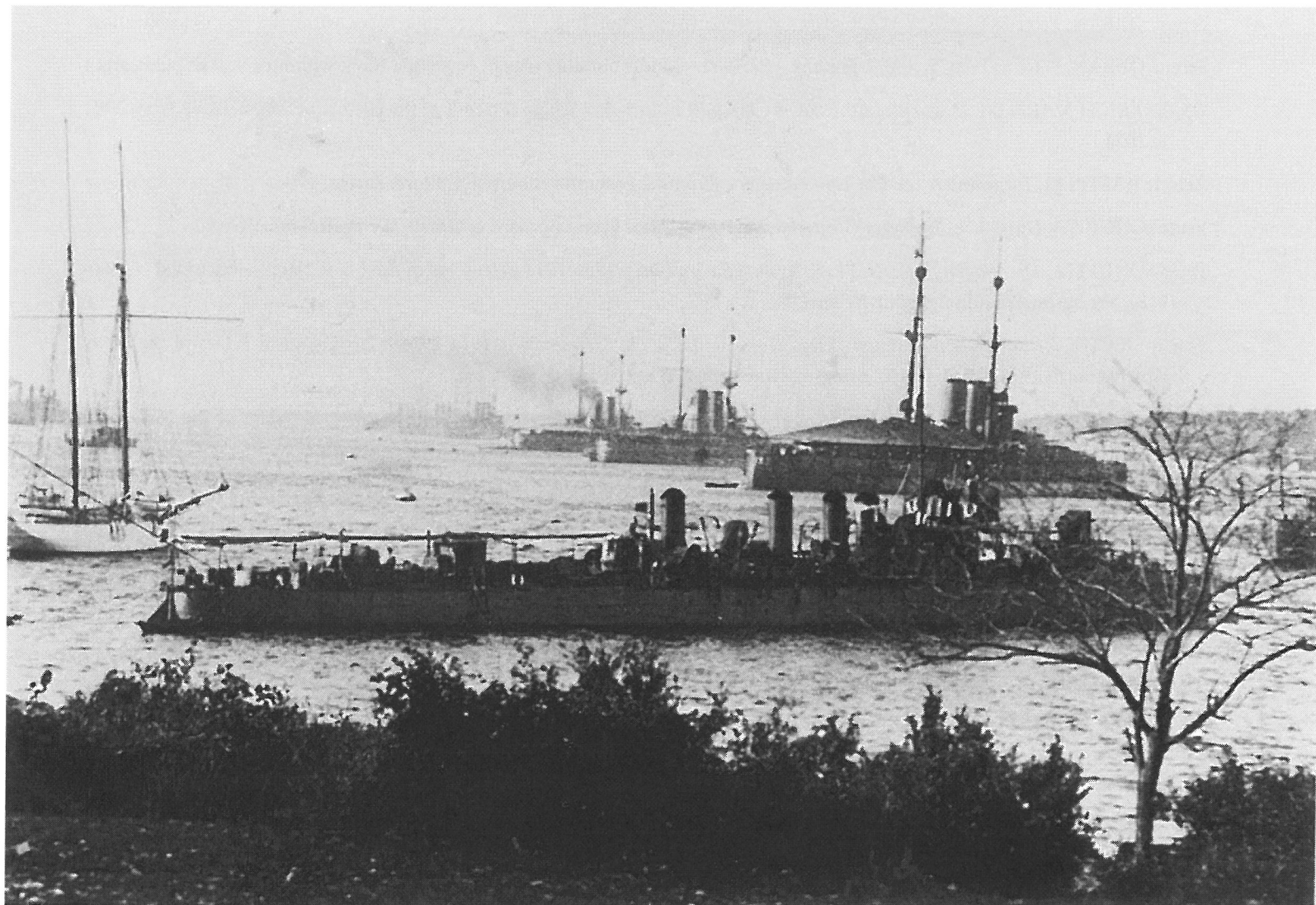
* Replacement for the 35 cm-Torpedos of the C Type.

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Austro-Hungarian fleet in Pula, in the foreground one *Huszár* class destroyer. (Wikipedia)

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ABOUT THE AUTHOR

Dr. Zvonimir Freivogel was born in Zagreb/Croatia in 1955; after the elementary school and the Classical gymnasium, he graduated at the School of Dental Medicine in 1979. Since 1979, he lives in Germany and was working there as a dentist in his own dental practice, between 1981 and his retirement in January 2019.

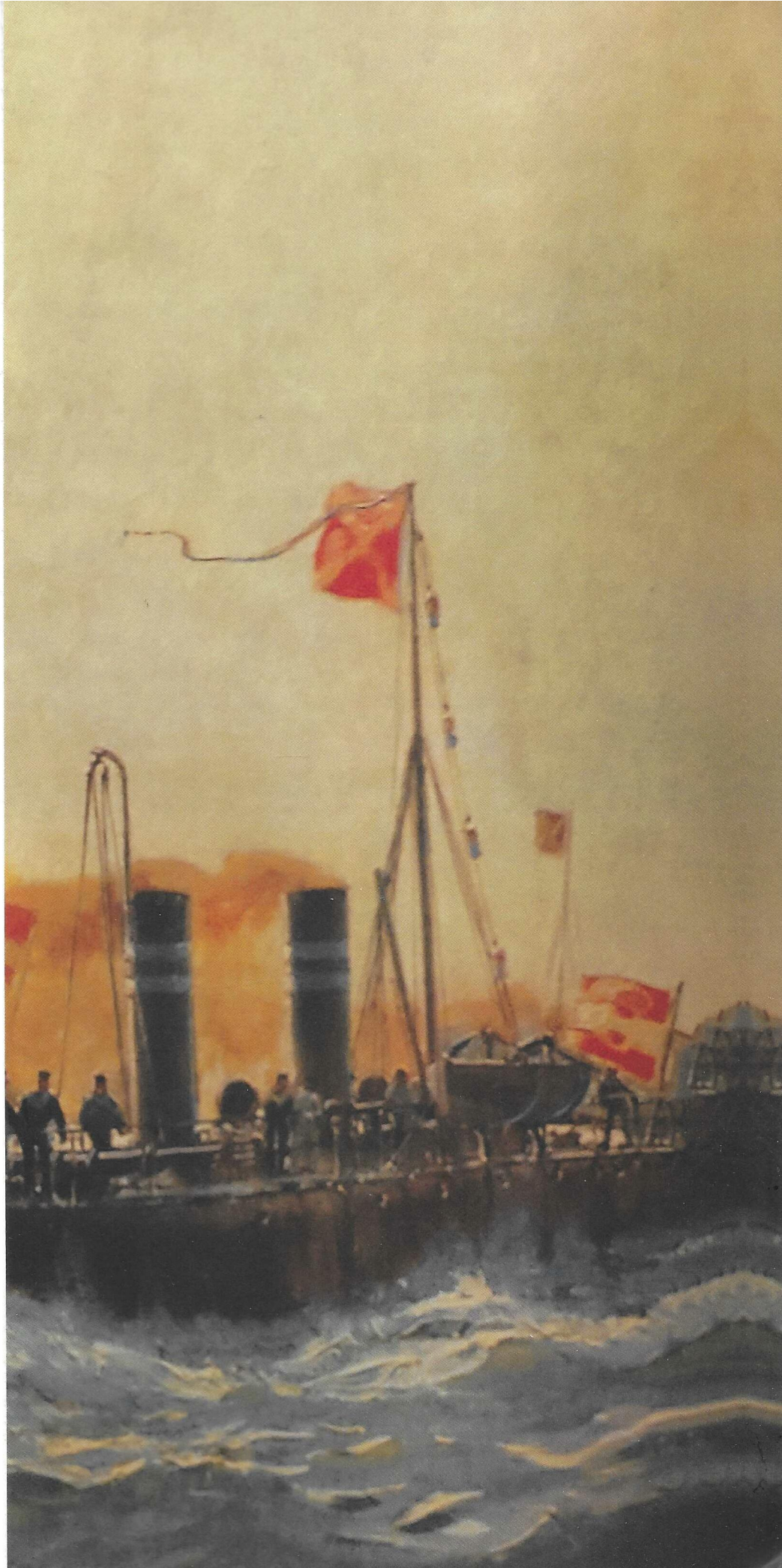
Since his youth he was interested in the maritime and naval history, and from 1992 onwards, he was publishing articles and books on these themes in Croatia, Germany, Austria, Italy, Poland, Czech Republic, Russia, Great Britain, and the U.S.A. He was a contributor of some naval yearbooks and took part at conferences about the maritime and naval matters in Croatia, Austria, and Germany. The articles from these conferences were published in corresponding yearbooks.

In Germany and Austria a dozen of his books about German, Italian, and Austro-Hungarian warships were published, and from the books that appeared in Croatia, two were published in Rijeka and the remainder in Zagreb, by the *Despot Infinitus d.o.o.* publishing house.

His main theme of interest were the warships of the former Yugoslavia, from the days of the ill-fated Royal Yugoslav Navy to the finally ill-led Navy of the Socialist Yugoslavia. Both parts of this work, covering the years between 1918 and 1991, are already published. Other books, about Austro-Hungarian torpedo boats, and German battleships *Bismarck* and *Tirpitz*, are in preparation.

Some of his books published by the *Despot Infinitus* publishing house at Zagreb:

- Adriatic Naval War 1940-1945 (with Dr Achille Rastelli), 2015
- The Battle of Lissa - 20 July 1866
- Austro-Hungarian Cruisers in World War One
- Pearl Harbor - December 7th, 1941, 2018
- Austro-Hungarian Battleships in World War One, 2018
- Raiders – German Auxiliary Cruisers in World War Two, 2018
- The Great War in the Adriatic Sea 1914 - 1918, 2019
- Austro-Hungarian Submarines
- Galeb* - The History of the Ship where the Non-Aligned Movement was conceived
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